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A DECISION THEORETIC SOLUTION FOR A BIDDING-WORK LOADING GAME

by

Thomas P. Tytula

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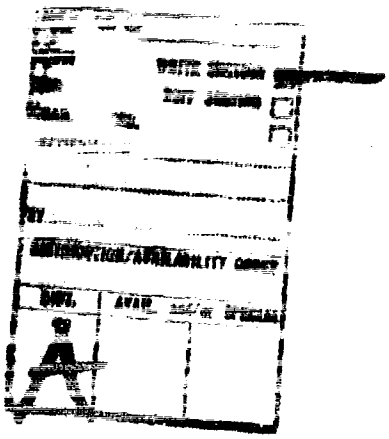

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INTRODUCTION

The process of decision making in a risky environment has received considerable emphasis in the past several years. This has been especially true in the Department of Defense since the early 1960's, where the program, planning, and budgeting system was first instituted. The program, planning, and budgeting system required explicit consideration of uncertainty [1] thus stimulating the study of decision processes when sequences of events and outcomes are not known. Experimental statistical hypothesis testing techniques have been in existence for a long time; however, with decisions involving very large expenditures of resources having to be made more often than not before any substantial experimental evidence became available, classical techniques were not adequate for the situation. This led many researchers to turn to Bayesian techniques which have the advantage of explicitly accounting for information and its associated uncertainty before the experimental evidence becomes available. Bayesian analysis of sequential decision problems became the vogue during the 1960's, with the oil industry sponsoring much of the research [2, 3, 4].

During the last half of the 1960's, public dissatisfaction with the results of the government's past decision making became more evident than ever before. Considerable attention was focused on the Department of Defense which spends a large portion of the annual budget

and where there was substantial evidence of program outcomes falling short of advertised objectives. A Congressional inquiry determined that uncertainty was a prime cause of the poor results being obtained [5]. In July 1969, Assistant Secretary of Defense Packard directed the military services to improve their procurement practices, taking special notice of the uncertainties involved in their program. The explicit consideration of risk was reemphasized in his May 1970 directive on the same subject.

The Department of the Army responded with a formal program to refine the materiel acquisition process, PROMAP 70. One task under PROMAP 70 was to set up a procedure for explicitly expressing program risk and taking it into account at key decision points in the life cycle of major Army materiel items. As a result of this task, risk analysis methodology evolved which expresses the risk associated with performance, time to develop and field, and cost to develop and field materiel items in the form of probability distributions of outcomes.

Methods of using these distributions in large scale sequential decision problems have not been entirely satisfactory thus far. The three main reasons for this shortcoming are as follows: (1) the problems are large and require unwieldy amounts of data to be available at each decision point, (2) a single index of the value of outcomes, i.e., a single utility index, is not easily generated for multiattribute problems, and (3) the decision system is unwieldy. Little can be done to substantially change the system in a short time period, and multiattribute utility functions are being examined by competent researchers [6]. There is hope for some improvement in data handling and presentation which is the subject of this paper.

The objective of this research was to find a way to present the data of a large scale sequential decision problem to a decision maker in a manner that will permit him to choose an optimal course of action while constraining the volume of the data to some "reasonable" size. The bidding-work-loading game was chosen as a vehicle for trying the technique because it is well defined, large in scale, and involves interactions between years. Solution of the game also provides a basis for grading the participants of classroom exercises in which the game is played, a tool which should be of some use to the instructor and, therefore, a secondary benefit of the research.

Chapter II of this paper presents a brief description of the bidding-work-loading game and Chapter III presents the formulation of a decision theoretic solution. A discussion of the solution and some examples showing the use of the tables is presented in Chapter IV, and some conclusions and recommendations for additional work are presented in Chapter V. The tables which are used in the decision calculation are contained in Appendix A.

CHAPTER II

THE BIDDING-WORK-LOADING GAME

The game which is solved in this paper is a heuristic development by Torgersen, Wyskida, and Yarbrough [7]. It was designed primarily as a training aid for use in classes and seminars dealing with competitive bidding and game theory. While there are many analytic bidding models in the open literature [8], the large majority of these are concerned with the choice of a bid price. In contrast, the game being analyzed here addresses the question of whether to bid at all. The probability of winning a bid is constant for all bid opportunities and the bid price is determined by the probability distribution of job duration and value shown in Figure 1. This is the result of the emphasis the game's authors [7] placed on optimum work loading and scheduling within a finite work capacity. In reference [7] it is stated that the relationship between bid price and probability of winning could easily be added to the game. The solution methodology described in the next chapter would remain applicable, although the presentation of results will become more unwieldy.

The game hypothesizes that the decision of whether to bid or not is dependent upon the number of bid opportunities that might be expected in the future, the trade-off between long range resource commitment and short term lucrative gain, and the decision criteria used. Each competitor is forced to consider the issue of availability

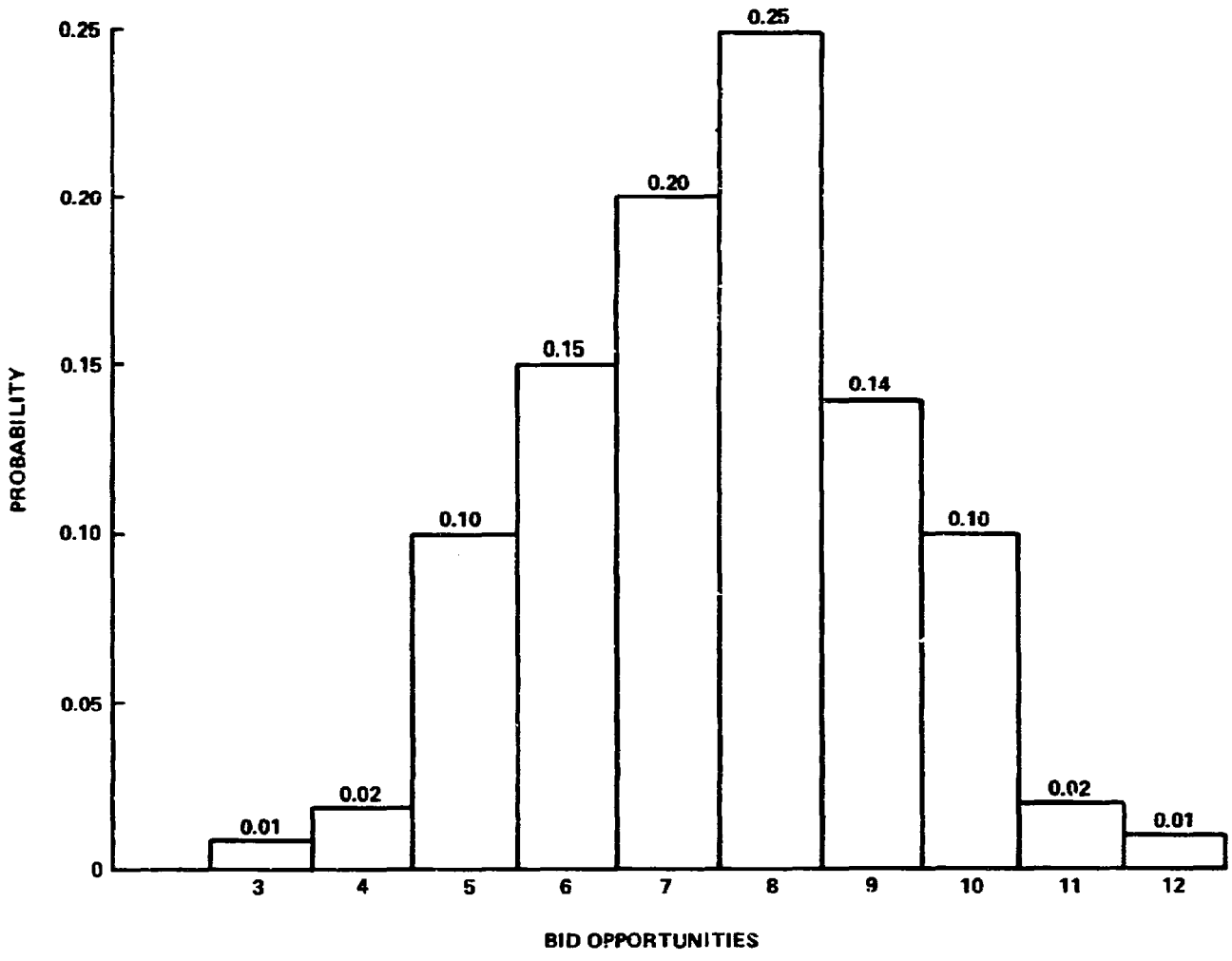

Figure 1. Probability Distribution of Number of Bid Opportunities [7]

of resources for performing the job by limiting the number of jobs that he can process simultaneously. The probability distribution of the number of bid opportunities per year (Figure 2) combined with the probability distribution of job duration and value and the probability of winning a bid are assumed to embody all significant factors in the game. The game objective is to increase the initial assets of the company (represented by a team of players) as much as possible over a fixed period of time. The teams operate independently, and the team with the largest final value of assets wins.

Each team starts the game with assets of $350 K. Dividends in the amount of 10 percent of the beginning-of-the-year assets must be paid to the stockholders. Thus, a team must have a net profit of $35 K after taxes to break even at the end of the first year. The only source of income for the company is from successfully bid jobs. If a job is finished in the year that it is bid, income is received at the end of the job. If a job extends into following years, income in each year is proportional to the amount of the total job duration scheduled in that year. The cost of bidding, which is 10 percent of job income, is incurred in the year the job is bid. Annual operating costs are 50 percent of annual income, and annual taxes are 50 percent of net annual income, payable at the end of each year.

Each company can perform no more than three jobs simultaneously. A job must be started in the year that it is bid and at the earliest possible time. No more than two jobs may be started in any 1 quarter. The number of bid opportunities determines a year. The game may extend for any period of time; however, 6 years is usually taken as the duration. The probability of winning any job which is bid is 0.55.

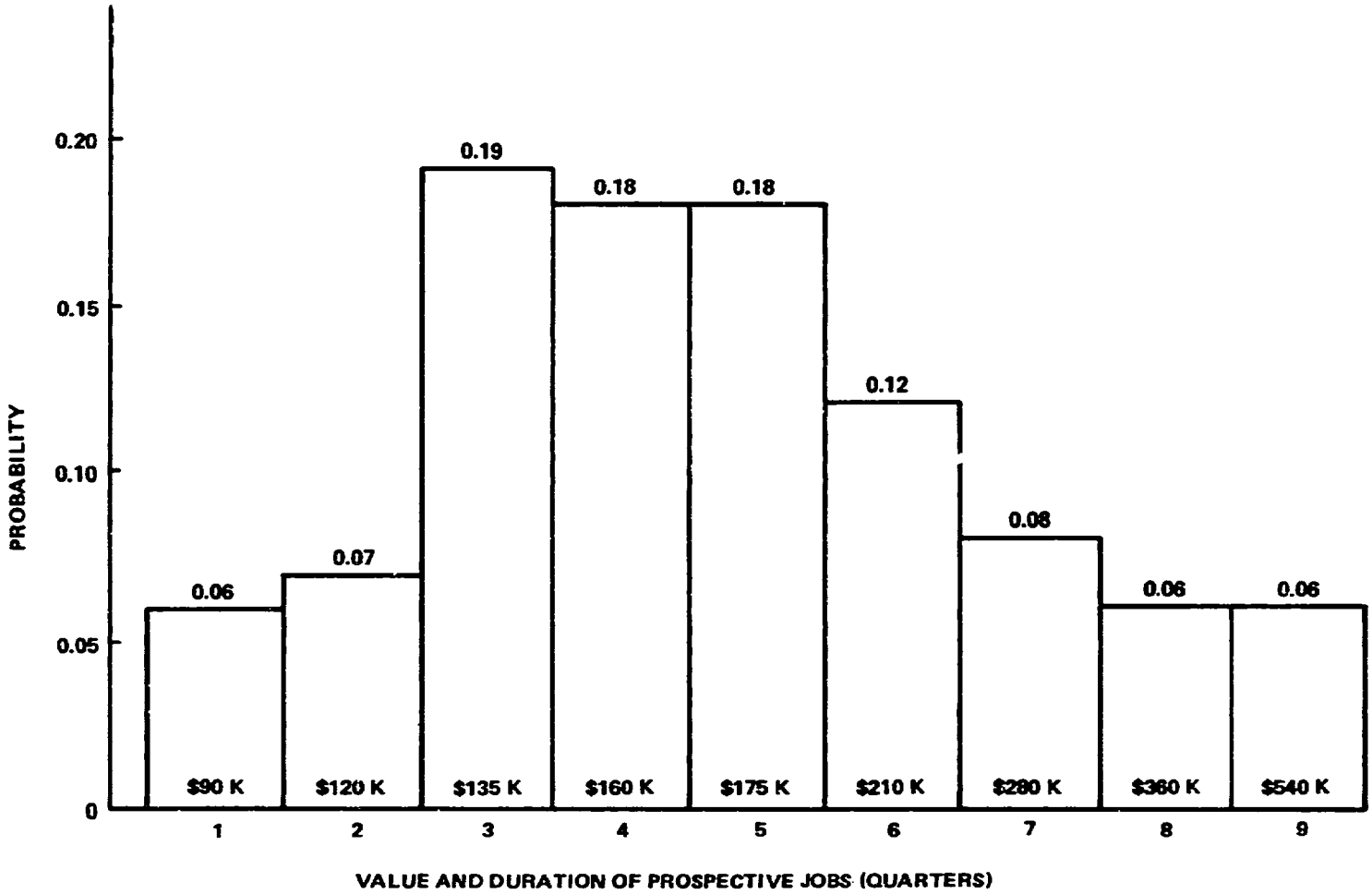

Figure 2. Probability Distribution of Prospective Job Value and Duration [7]

Despite the simplicity of the game, it embodies several characteristics that make it representative of real decision problems. One of these is the interaction between time periods as exemplified by some jobs having a duration greater than a year and the carry-over of work load and income from year to year. Another feature is the large number of possible outcomes which can occur. A third feature is the random nature of the outcome of the game. Taken together, these characteristics indicate that a formal, decision theoretic solution to the game will provide a useful example of a technique for analyzing large scale decision problems and presenting the results in a format that is useful to management.

CHAPTER III

DECISION THEORETIC SOLUTION

In this chapter the bidding-work-loading game will be formulated in a manner suitable for decision theoretic solution techniques. The sequence of presentation will include a brief discussion of some decision theory techniques, followed by a formulation of the game in general. The constraints of the game will then be introduced into the problem formulation and the solution methodology will be presented. Finally, the manner of presenting the results will be outlined.

Raiffa [3] describes two general methods for formally analyzing decision problems whose outcomes are uncertain. These are commonly called the normal form of analysis and the extensive form of analysis. In the normal form, a systematic enumeration of all possible sequences of decisions, or strategies, is undertaken and the outcomes of each strategy are assessed conditional on each chance event occurring. This defines the joint conditional evaluation space for the problem. The optimum solution in this space can be found by a number of techniques including branch and bound [9]. The normal form has the advantage of delaying the assessment of the probabilities associated with chance events until late in the solution after many strategies have been eliminated by dominance considerations. This is a beneficial property when the probabilities are difficult to obtain. However, this advantage is overshadowed by the difficulties associated with enumerating a large

number of strategies for large scale decision problems and by the need to repeatedly solve the problem at every decision point in the sequence for all possible strategy sets.

The extensive form of analysis involves arranging in chronological order all possible sequences of decisions and chance events, assigning probabilities to the chance events, and then solving the problem by dynamic programming. The chronological arrangement of all possible sequences is usually accomplished by drawing a decision tree for the problem. Drawing a decision tree is not practical for problems as large as the bidding-work-loading game, but where it is practical it automatically displays the optimal decisions for all possible sequences of events.

Finally, straightforward dynamic programming techniques may be used [10, 11]. Stages are defined as the events occurring between decision points in a sequence of events. At each stage there is an input state, a decision, and a random variable which together determine the net gain realized from that stage. The random variables are assumed to be independent and the total return from all stages is assumed to be the sum of the individual stage returns. The decision rule usually chosen is to maximize the total expected return. The dynamic programming approach involves calculation of the optimal decision for all possible input states at each possible decision point, a relatively large number of calculations for the bidding-work-loading game. While this in itself is not a particularly difficult chore with modern computers, presentation of the optimal course of action for all possible decisions usually becomes cumbersome. Nevertheless, by presenting a suitably chosen set of partially calculated results, leaving

a small amount of calculation to be done once the input state is known, it is possible to handle relatively large problems without recourse to voluminous documentation. This is the approach used in solving the bidding-work-loading game.

Before proceeding with the dynamic programming formulation, a brief discussion of the decision rule is in order. The rule which will be used is to maximize the total expected increase in the company's future monetary assets. The maximization of expected monetary value is not always a good decision criteria, especially for a risk-averse individual confronted with a one time only decision. However, when the decision situations will be repeated many times in a sequence of events, with the probability distribution governing the outcome remaining constant from decision to decision, the law of large numbers begins to dominate, making the expected outcome a better decision variable than any other. Because this situation occurs in the bidding-work-loading game, the expected monetary value approach appears suitable for the problem.

Proceeding with the problem formulation, recall from Chapter II that only three jobs may be processed simultaneously. This constraint is represented by assuming the existence of three time channels identified only by the amount of unused work capacity in each. Also recall from Chapter II that some of the potential jobs are longer than 1 year in duration, the longest being 9 quarters. Accordingly, by considering a time channel to be 3 years, the work potential of the company may be described by a square matrix of the time available, with elements T_{ij}, where the index i is associated with the year and the index j is used to describe the relative length of time available

in each channel. T_{i1} is always the channel with the greatest amount of unused work capacity, T_{i2} has the next greatest amount of time, and T_{i3} has the least amount of unused work time. This convention plays a substantial role in reducing the number of states which must be examined because many of the possible numerical combinations are eliminated by the convention. The condition i = 1 refers to the current year.

Two additional variables combine with available work time to completely describe the state of the company. These are the number of bid opportunities remaining in the year, N, and the number of years remaining in the game, M. The condition M = 0 refers to the game being in its last year, and the maximum value of M is the duration of the game, less 1 year. Now define f(T, N, M) as the expected increase in the company's future assets, given that the optimal decision is made at each decision point and that the state of the company is described by the state variables T, N, M. Thus,

$$f(T, 2, 3); \quad T = \begin{bmatrix} 3 & 0 & 0 \\ 4 & 2 & 0 \\ 4 & 4 & 3 \end{bmatrix} \tag{1}$$

is the expected value of the increase in the company's assets with two bid opportunities remaining in the fourth year from the end of the game, with only 3 quarters of unused work capacity available in the current year. Two jobs are in process, one taking up 2 quarters of the following year ($T_{22} = 2$) and one overlapping 1 quarter into the third year into the future ($T_{23} = 0$, $T_{33} = 3$).

For future years, the number of bid opportunities available during the year is known only by its probability distribution. Define

$$f_m(T, M); \quad T = \left[T_{ij}\right] \tag{2}$$

as the maximum expected increase in assets during the remainder of the game with M years remaining to be played, given that at the start of year M the unused work capacity is defined by the matrix, T. This will be referred to later as the annual summary of expected increase in assets and will enter into the calculations. Clearly, for T and M fixed,

$$f_m(T, M) = \sum_{n=3}^{12} p_n \, f(T, N, M) \quad , \tag{3}$$

where p_n is the probability that there will be exactly N bid opportunities during the year.

At each stage in the decision problem, the input state of the company is the amount of unused work time available, the number of bid opportunities remaining in the current year (after the decision is made), and the number of years remaining after the current year. The value and duration of the job may be thought of as an input condition. After the decision is made, the output state of the company may change, depending on the decision that was made and the chance outcome resulting from the decision. This possible change in the company's state bears heavily on whether to bid the job or not because it influences the company's ability to do work in the future. Since N and M have been defined in a manner which holds them constant for the input and output states (except when $N = 0$ in which case the next possible value of M is $M - 1$), the only state variable which will change is the matrix T. Now suppose that the job being considered is of duration t_k. If the job is bid and won, the time available for additional jobs will be changed from that described by T to that described by T'. The method

of transformation is relatively straightforward. The duration of the job is subtracted from element T_{11} of the matrix. If the result is negative, T_{11} becomes 0 and the overlap is subtracted from element T_{12}. Again, if the result is negative, T_{12} becomes 0 and the overlap is subtracted from element T_{13}. Finally, each row of the matrix is reordered so that $T_{i1} \geq T_{i2} \geq T_{i3}$ to get the T matrix. Stated mathematically:

$$T'_{11} = \begin{cases} \max\left(T_{11} - t_k, 0\right); & T_{11} - t_k \geq T_{12} \quad , \\ T_{12}; & T_{11} - t_k < T_{12} \quad , \end{cases}$$

$$T'_{12} = \begin{cases} T_{13}; & T_{11} - t_k < T_{13} \quad , \\ \max\left(T_{11} - t_k, 0\right); & T_{12} < T_{11} - t_k \leq T_{13} \quad , \\ T_{12}; & T_{11} - t_k \geq T_{12} \quad , \end{cases}$$

$$T'_{13} = \begin{cases} T_{13}; & T_{11} - t_k \geq T_{13} \quad , \\ \max\left(T_{11} - t_k, 0\right); & T_{11} - t_k < T_{13} \quad , \end{cases}$$

$$T'_{21} = \begin{cases} T_{21}; & T_{11} - t_k \geq 0 \quad , \\ T_{22}; & T_{21} - \left(t_k - T_{11}\right) < T_{22} \quad , \\ T_{21} - \left(t_k - T_{11}\right); & T_{21} - \left(t_k - T_{11}\right) \geq T_{22} \quad , \end{cases}$$

$$T'_{22} = \begin{cases} T_{22}; & T_{21} - \left(t_k - T_{11}\right) \geq T_{22} \quad , \\ \max\left(T_{21} - t_k + T_{11}, 0\right); & T_{23} \leq T_{21} - \left(t_k - T_{11}\right) < T_{22} \quad , \\ T_{23}; & T_{21} - \left(t_k - T_{11}\right) < T_{33} \quad , \end{cases}$$

$$T'_{23} = \begin{cases} T_{23}; & T_{21} - \left(t_k - T_{11}\right) \geq T_{21} \\ \max\left(T_{21} - t_k + T_{11}, 0\right); & T_{21} - \left(t_k - T_{11}\right) < T_{23} \quad , \end{cases}$$

$$T'_{31} = \begin{cases} T_{31}; & T_{21} - \left(t_k - T_{11}\right) > 0 \quad , \\ T_{31} - \left(t_k - T_{11} - 4\right) & ; \quad \text{otherwise,} \end{cases}$$

$$T'_{32} = \begin{cases} T_{32}; & T_{21} - \left(t_k - T_{11}\right) > 0 \quad , \\ T_{31} - \left(t_k - T_{11} - 4\right); & T_{31} - \left(t_k - T_{11} - 4\right) \geq T_{33} \quad , \\ T_{33}; & \text{otherwise} \quad , \end{cases}$$

$$T'_{33} = \begin{cases} T_{33}; & T_{31} - \left(t_k - T_{11} - 4\right) \geq T_{33} \quad , \\ T_{31} - \left(t_k - T_{11} - 4\right); & \text{otherwise} \quad . \end{cases} \tag{4}$$

In the special case $N = 0$,

$$\left.\begin{aligned} T'_{ij} &= T_{i+1,\,j}; \quad i = 1, 2, \\ T'_{3j} &= 4 \, , \end{aligned}\right\} \text{for all } j \quad . \tag{5}$$

With the state transformations described, the increase in assets resulting from bidding and winning a job will now be considered. Recall from Chapter II that each of the k jobs, $k = 1, 2, \ldots 9$, is defined by its value, duration, and probability of occurrence. Let V_k be the value of the k^{th} job, p_k the probability that the k^{th} job is offered for bid, and as before, t_k the duration of the k^{th} job. The rate of income from the k^{th} job is simply V_k/t_k. Now let

$$GG = \sum_{n=0}^{N} I_{n,\,k}\, \delta \quad , \tag{6}$$

where

GG = gross gain in a year

$I_{n,\,k}$ = income increment from the k^{th} job

$$\delta = \begin{cases} 0 \text{ if the job is bid and lost or if it is not bid} \\ 1 \text{ if the job is bid and won} \end{cases}$$

N = the number of bid opportunities in a year.

Further let NG be the net gain in a year, C be the total annual operating expenses, and C_B be the total bid cost (sum of bid cost for jobs that are bid and won and for jobs that are bid and lost). From Chapter II, the bid cost associated with each job is 10 percent of its value, the expenses are one-half of gross gain, and taxes are one-half of before taxes profit. Letting P_o be the before taxes profit and NP be the net profit, these definitions lead to

$$NG = GG - C = \frac{1}{2} \sum_{n=0}^{N} I_{n,\,k}\,\delta \tag{7}$$

$$P_o = NG - C_B = \frac{1}{2} \sum_{n=0}^{N} I_{n,\,k}\,\delta - C_B \tag{8}$$

$$NP = \frac{1}{2}\,P_o = \frac{1}{2}\left[\frac{1}{2} \sum_{n=0}^{N} I_{n,\,k}\,\delta - C_B\right] = \sum_{n=0}^{N} \frac{1}{4}\, I_{n,\,k}\,\delta - \frac{1}{2}\,C_B \tag{9}$$

For any job that is bid and won, the increment of income in the year is proportional to the amount of the job that is performed in that year. Accordingly, for the year in which the job is bid and won,

$$I_{n,\,k} = \frac{V_k}{t_k}\,k_1 \tag{10}$$

where

$$k_1 = \begin{cases} t_k; & t_k \le T_{11} \\ t_{11}; & t_k > T_{11} \end{cases}, \tag{11}$$

Finally, let

$$R_k = \frac{1}{4}\,\frac{V_k}{t_k} \tag{12}$$

The quantity R_k is the adjusted rate of income from the k^{th} job. Clearly it is the same for all years during which the job is being done. Following the same procedure, $1/2\ C_B = \sum 1/2$ bid cost for those jobs bid, and the quantity $C_{Bk} = 1/2$ bid cost is the adjusted bid cost for the k^{th} job.

One additional consideration, payment of dividends, must be examined before the change in assets resulting from bidding a job can be calculated. The rules of the game require that a dividend of 10 percent of the beginning-of-the-year assets be paid each year. This may be accounted for as follows. Let W_m be the total worth of the assets of the company at the beginning of the m^{th} year and let G_{m+1} be the incremental change in assets during the year. The net change in assets during the year is

$$\Delta W = G_{m+1} - 0.1\ W_m \tag{13}$$

and the total worth of the company at the beginning of the $m+1^{st}$ year is

$$W_{m+1} = W_m + G_{m+1} - 0.1\ W_m = 0.9\ W_m + G_{m+1} \quad . \tag{14}$$

Similarly, at the end of the $m+1^{st}$ year (or beginning of the $m+2^{nd}$ year),

$$W_{m+2} = 0.9\ W_{m+1} + G_{m+2} = (0.9)^2\ W_m + 0.9\ G_{m+1} + G_{m+2} \quad . \tag{15}$$

If $W_m = W_o$, the initial assets of the company at the start of the game, following the process through for m years yields

$$W_m = (0.9)^m W_o + (0.9)^{m-1}\ G_1 + \ldots + 0.9\ G_{m-1} + G_m \quad . \tag{16}$$

This result states that the increase in assets during each year is reduced by dividend payments during subsequent years, and shows that

simply multiplying the gain in assets during a year by the appropriate constant (the constant is dependent on the year in which the gain occurs) accounts for this. Because the probabilistic future changes in assets are being examined in light of expected changes, application of the expectation operator E (by definition [12] $E(X) = \sum_{\text{all } x} x \Pr[X = x]$) to Equation (16) yields

$$E(W_m) = 0.9^m W_o + 0.9^{m-1} E(G_1) + \ldots + 0.9E(G_{m-1}) + E(G_m) . \quad (17)$$

The expected gains will always be greater than or equal to zero (a minimum gain of zero can always be obtained by not bidding), therefore Equation (17) presents no difficulties with losses which may in fact occur.

The preceding paragraphs provide the necessary groundwork for calculating the change in assets if it is decided to bid and the bid is won. Let $\Delta_k(T, N, M)$ be the net change in the company's assets resulting from bidding the k^{th} job when the input state of the company is defined by T, N, M. If the bid is lost,

$$\bar{\Delta}_k(T, N, M) = - C_{Bk} . \quad (18)$$

If the bid is won,

$$\Delta_k(T, N, M) = R_k\left[(0.9)^m k_1 + (0.9)^{m-1} k_2 + (0.9)^{m-2} k_3\right] - C_{Bk} , \quad (19)$$

where

$$k_1 = \begin{cases} t_k \text{ if } t_k < T_{11} , \\ T_{11} \text{ otherwise} , \end{cases}$$

$$k_2 = \begin{cases} 0 \text{ if } t_k \leq T_{11} \text{ or if } M = 0 \ , \\ t_k - T_{11} \text{ if } 0 < \left(t_k - T_{11}\right) \leq 4 \ , \\ 4 \text{ otherwise} \ , \end{cases}$$

$$k_3 = \begin{cases} 0 \text{ if } t_k < 4 + T_{11} \text{ or if } M \leq 1 \ , \\ t_k - T_{11} - 4 \text{ otherwise} \ . \end{cases}$$

Clearly, if it is decided to not bid, $\Delta_k(T, N, M) = 0$.

As stated previously in this chapter, the result of this analysis of the bidding-work-loading game is to be a set of partially calculated results which leave just a few simple calculations to be done by the decision maker to reach an optimum decision. These partial results consist of two sets of tables which depict: (1) the expected increase in monetary assets of the company during the remainder of the game provided the year is started with initial conditions T and (2) the expected increase in the company's assets during the remainder of the game provided there are N bid opportunities in the current year and M additional years remaining in the game, and unassigned work capacity, T; e.g., f(T, N, M). Both sets of tables are generated by a set of recursion relationships as follows. Let

$$B_{nk} = p\left[\Delta_k(T, N, M) + f(T', N-1, M)\right] + (1 - p)\left[f(T, N-1, M) + \bar{\Delta}_k(T, N, M)\right] \tag{20}$$

be the expected future gain in assets of the company if the job is bid provided the input state for the decision is T, N, M and the k^{th} job is being considered, where p is the probability of being successful if the job is bid. Let

$$\bar{B}_{nk} = f(T, N-1, M) \tag{21}$$

be the expected future increase in assets if the job is not bid. The decision rule is to bid if $B_{nk} \geq \bar{B}_{nk}$. The first term of Equation (20) is the increase in expected assets provided the job is bid and won, while the second term is the expected increase in assets provided the job is bid and lost. The expected future increase in assets for any input state and a known job, k, provided the optimal course of action is taken, is

$$f_k(T, N, M) = \delta\ B_{nk} + (1 - \delta)\ \bar{B}_{nk} \quad , \tag{22}$$

where

$$\delta = \begin{cases} 1 \ ; & B_{nk} \geq \bar{B}_{nk} \\ 0 \ ; & \text{otherwise} \end{cases} .$$

If the job to be considered is not yet known, then the expected increase in assets for the given input state is

$$f(T, N, M) = \sum_{k=1}^{9} p_k\ f_k(T, N, M) \quad , \tag{23}$$

where p_k is the probability that the k^{th} job will come up with N bid opportunities remaining.

Two special cases arise which cause slight changes in at least one of Equations (19) through (22). The first is caused by the condition $N = M = 0$. In this case,

$$f(T', N-1, M) = f(T, N-1, M) = 0$$

and the solution proceeds as before. This case arises on the last play of the game, which is the first decision stage in the dynamic programming formulation. A second case arises when $N = 0$, $M \neq 0$. In this case,

$f(T', N-1, M)$ and $f(T, N-1, M)$ must be replaced by $f_{m-1}(T', M-1)$ and $f_{m-1}(T, M-1)$, respectively. Equations (20) and (21) then become

$$B_{nk} = p\left[\Delta_k(T, N, M) + f_{m-1}(T', M-1)\right] + (1 - p)\left[f_{m-1}(T, M-1) + \bar{\Delta}_k(T, N, M)\right] \tag{24}$$

and

$$\bar{B}_{nk} = f_{m-1}(T, M-1) \quad . \tag{25}$$

These substitutions account for the fact that the decision must consider gains in following years without knowing the number of bid opportunities which will occur in that year.

Tables of the expected future increase in assets have been generated by solving Equation (23) for all meaningful combinations of the state variables T, N, and M, starting with the least possible value of the matrix T, and with $M = N = 0$. A Fortran V computer program has been written for the Univac 1108 which solves the equation for all possible states and generates tables of $f(T, N, M)$ and $f_m(T, M)$. The tables are contained in Appendix A. Appendix B contains a flow chart of the computer program used to generate the tables. Chapter IV presents a discussion of the use of the tables with several examples.

CHAPTER IV

DISCUSSION AND EXAMPLES

In the preceding chapter a set of recursion relationships was developed which have been used to generate tables of $f(T, N, M)$ and $f_m(T, M)$. The tables for a 3-year game are presented in Appendix A. The arrangement of the tables and several examples which illustrate their use are presented in this chapter.

One of the first pieces of information needed is the adjusted job parameters; i.e., the adjusted income rate, R_k, and the adjusted bid cost, C_{Bk}, as determined from the relationships of Chapter III. These, along with the job duration are presented in Table I. The appropriate values will be used to calculate the Δ_k, and hence, the B_{nk} and $\bar{B}_{nk}$ in the examples which follow.

Table I. Adjusted Job Parameters

Job No., k	Income Rate, R_k, ($1000)	Bid Cost, C_{Bk}, ($1000)	Duration, t_k, (Quarters)
1	22.50	4.50	1
2	15.00	6.00	2
3	11.25	6.75	3
4	10.00	8.00	4
5	8.75	8.75	5
6	8.75	10.50	6
7	10.00	14.00	7
8	11.25	18.00	8
9	15.00	27.00	9

Before getting into the examples, some discussion of the format used in the $f(T, N, M)$ and $f_m(T, M)$ tables will be helpful. The tables are arranged by increasing M and increasing N within the year M, where N is the number of bid opportunities remaining. Within each table, $f(T, N, M)$, the expected increase in assets, is given for all possible values of the unused work time matrix, T. The table of $f(T, N, M)$ is followed immediately by the table of $f_m(T, M)$ for the same value of M. The available work time matrix in the tables is arranged as follows. During the first year, T is the row matrix, $T = [T_{11}\ T_{12}\ T_{13}]$*. In the second year, T is the rectangular matrix,

$$T = \begin{bmatrix} T_{11} & T_{12} & T_{13} \\ T_{21} & T_{22} & T_{23} \end{bmatrix},$$

and in the third year it is the square matrix,

$$T = \begin{bmatrix} T_{11} & T_{12} & T_{13} \\ T_{21} & T_{22} & T_{23} \\ T_{31} & T_{32} & T_{33} \end{bmatrix}.$$

Note that each row represents the time available in each job channel during the year, the top row being the current year, and that each column represents the available work time in each job channel with the longest available time in the first column.

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*Because the tables have been generated by the computer, the subscripts ij have been placed on the same line as the variable; e.g., T_{13} is written T13 in the tables.

The set of all possible values of the elements of the T matrix has been partitioned in such a way that, for a given value of T_{11}, only two of the other elements vary. For the first year, then, the tables are arranged so that for a fixed value of T_{11}, the value of $f(T, N, M)$ and $f_m(T, M)$ is tabulated as a function of the state of T_{12} and T_{13}. Table II, which gives $f(T, 3, 0)$, illustrates this. To use the table, if $T = (2, 2, 1)$ then $f(T, 3, 0)$, is \$10.960 K. When M is 1, the elements of T are partitioned into three subsets. Accordingly, for every value of T_{11}, $f(T, N, 1)$ is tabulated as a function of either T_{12} and T_{13}, T_{22} and T_{23}, or T_{12} and T_{23}. In a similar fashion for M = 2, the elements

Table II. Expected Increase in Assets, 1000's of \$, 0 Years and 3 Bid Opportunities Remaining

		T= 1 T12 T13			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	2.262	2.508			
T13=1		2.520			
		T= 2 T12 T13			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	7.671	8.294	10.823		
T13=1		8.333	10.960		
T13=2			11.765		
		T= 3 T12 T13			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	14.474	15.225	18.026	22.624	
T13=1		15.262	18.186	22.871	
T13=2			18.987	23.961	
T13=3				26.125	
		T= 4 T12 T13			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	20.092	20.785	23.873	28.744	33.385
T13=1		20.821	24.030	28.969	33.610
T13=2			24.939	30.142	34.952
T13=3				32.405	37.353
T13=4					39.861

of T have been partitioned into six subsets, each of which has only two elements varying for a fixed value of T_{11}. A typical table entry is shown in Table III. Note that each partition of the elements of T is such that the elements above and to the right of the elements that are varying are 0, while those below and to the left are 4.

With the preliminaries completed, some examples should illustrate the use of the tabulated results. Suppose that the game is in the last year of play (M = 0), that there were seven bid opportunities in the year, and that the job up for consideration is the fifth bid opportunity of the year and involves job 4 from Figure 2 which is 4 quarters in duration and has a value of $160 K. Suppose that the company has three jobs underway, one being completed at the end of the first quarter (giving $T_{1j} = 3$), one being completed at the end of the third quarter (giving $T_{1j} = 1$), and one lasting until the end of the year (giving $T_{1j} = 0$). Arranging the elements of T in descending order gives T = [3 1 0]. From Table I, job number 4 has an adjusted rate of income of $10 K per month and an adjusted bid cost of $8 K. Its duration is 4 quarters; however, the maximum time available is 3 quarters. If the job is bid and won, the transformed T matrix is T' = [1 0 0], which is found by subtracting t_k from T_{11} and, if the difference is negative, substituting zero in its place, then rearranging the elements in descending order. If the job is not bid, or if it is bid and lost, T does not change so that T' = T. Using the above information and the relationships developed in Chapter III, the following calculations are made:

$$N = 7 - 5 = 2 \quad .$$

Table III. Expected Increase in Assets, 1000's of $,
2 Years and 2 Bid Opportunities Remaining

		1 0 0			
		T= 4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	83.570	143.644	144.761	145.694	146.555
T33=1		87.359	144.761	145.694	146.555
T33=2			90.272	145.694	146.555
T33=3				92.009	146.555
T33=4					92.485
		1 0 0			
		T= 4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	103.863	107.188	109.556	110.460	110.691
T22=2	107.019	110.576	113.241	114.431	114.693
T22=3	109.309	112.687	115.476	116.776	117.079
T22=4	112.441	115.378	118.011	119.357	119.646
		1 T12 0			
		T= 4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	112.441	115.378	118.011	119.357	119.646
T12=1	118.936	121.846	124.162	125.239	125.468
		1 0 0			
		T= 4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	92.485	119.646	126.632	125.078	128.772
T22=1		118.604	129.364	128.772	132.309
T22=2			125.078	132.309	129.937
T22=3				129.937	133.757
T22=4					134.961
		1 T12 0			
		T= 4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	119.646	129.364	132.309	133.757	134.961
T12=1	125.468	132.915	135.242	136.558	137.814
		1 T12 T13			
		T= 4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	134.961	137.814			
T13=1		136.407			

If the job is bid and won:

$$\Delta = (\$10\ K)(3) - \$8\ K = \$22\ K$$

$$T' = [1 \quad 0 \quad 0]$$

$$f(T', 2, 0) = \$1.758\ K \quad .$$

If the job is bid and lost:

$$\bar{\Delta} = -\$8\ K$$

$$T = [3 \quad 1 \quad 0]$$

$$f(T, 2, 0) = \$13.222\ K$$

$$B = 0.55(\$22\ K + \$1.758\ K) + 0.45(\$13.222\ K - \$8\ K) = \$15.417\ K \quad ,$$

If the job is not bid,

$$\bar{B} = \$13.222\ K \quad ,$$

and because $B > \bar{B}$, the job should be bid.

Consider another example. Suppose that the game is in the next to the last year of play, that the job under consideration is the third out of 12 bid opportunities for the year, and that the company has one job underway which will be completed at the end of the third quarter and one which will be completed at the end of the second quarter. Thus, $N = 12 - 3 = 9$ and

$$T = \begin{bmatrix} 4 & 2 & 1 \\ 4 & 4 & 4 \end{bmatrix} \quad .$$

(Note that if $T_{1j} > 0$, T_{2j} must be 4.) Suppose that job number one comes up next. From Table I, the adjusted rate of income is \$22.5 K per quarter and the adjusted cost is \$4.5 K. The job's duration is 1 quarter, which will be completed in the current year. As before, the

transformed T matrix is found by setting $T'_{11} = \max\left(0, T_{11} - t_k\right) = 3$. In this case, it is not necessary to rearrange either row, so that

$$T' = \begin{bmatrix} 3 & 2 & 1 \\ 4 & 4 & 4 \end{bmatrix} .$$

Again using the equations of Chapter III, the following calculations are made.

If the job is bid and won,

$$\Delta = \$22.5\ K\ (0.9)(1) - \$4.5\ K = \$15.75\ K$$

$$T' = \begin{bmatrix} 3 & 2 & 1 \\ 4 & 4 & 4 \end{bmatrix}$$

$$f(T', 9, 1) = \$116.382\ K .$$

If the job is bid and lost,

$$\bar{\Delta} = -\$4.5\ K$$

$$T = \begin{bmatrix} 4 & 2 & 1 \\ 4 & 4 & 4 \end{bmatrix}$$

$$f(T, 9, 1) = \$121.818\ K .$$

Hence

$$B = 0.55(\$15.75\ K + \$116.382\ K) + 0.45(\$121.818\ K - \$4.5\ K) = \$125.466\ K .$$

If the job is not bid,

$$\bar{B} = \$121.818\ K ,$$

and again the job should be bid because $B > \bar{B}$.

Consider one final example which will illustrate the situation when all of the current year's work capacity can be used up. Suppose

that the company has one job underway which will be completed at the end of the third quarter of the current year, one which will be completed at the end of the current year, and one which will be completed at the end of the following year. Assume that the company is in the first year of a 3-year game. This gives an available time matrix of

$$T = \begin{bmatrix} 1 & 0 & 0 \\ 4 & 4 & 0 \\ 4 & 4 & 4 \end{bmatrix} .$$

Suppose there will be nine bid opportunities during the year, and that this is the fifth, with job number nine up for consideration. Its value is \$540 K and its duration is 9 quarters. As before, $N = 9 - 5 = 4$. The transformed T matrix is found in a manner similar to that used before. First, $T'_{11} = \max\left(0, T_{11} - t_k\right) = 0$. The first row is then [0 0 0]. Now, because T'_{11} is zero, it is necessary to see if the job extends into the following year. This occurs if $t_k - T_{11} > 0$, which is the case in this example. If there is no overlap, nothing else need be done unless all elements of the first row are zero (this will be discussed below). If there is overlap, set $T'_{21} = \max\left(0, 4 - t_k + T_{11}\right)$. If T'_{21} is zero, the same procedure is followed and if $t_k - 4 - T_{11} > 0$, overlap does exist. If it does, set $T'_{31} = 8 - t_k + T_{11}$. For the example, following this procedure yields a transformed second row of [0 4 0] and a transformed third row of [0 4 4]. The next step in obtaining T' is to rearrange each row in descending order, yielding

$$T' = \begin{bmatrix} 0 & 0 & 0 \\ 4 & 0 & 0 \\ 4 & 4 & 0 \end{bmatrix} .$$

In this case the top row consists of elements all of which are zero, indicating that if the job is bid and won, the company will not be able to undertake additional work in the current year because its work capacity is used up. The expected future increase in assets which is used in the decision calculation must take this into account. This is done by deleting the first row, and, if $M > 2$, adding a row of fours on the bottom. In the example, the transformed matrix becomes

$$T' = \begin{bmatrix} 4 & 0 & 0 \\ 4 & 4 & 0 \end{bmatrix}^* .$$

Also, M is reduced by one, so that $M' = M - 1 = 1$ for the example, and the annual summary must be used because it is not yet known how many bid opportunities will occur in the next year.

Continuing, from Table I the adjusted rate of income from job 9 is \$15 K per quarter and the adjusted bidding cost is \$27 K. Then as before, if the job is bid and won,

$$\Delta = \$15\text{ K}\left[1(0.9)^2 + 4(0.9) + 4\right] - \$27\text{ K} = \$99.15\text{ K} ,$$

$$f_m(T', 1) = \$71.558\text{ K} .$$

If the job is bid and lost, $T' = T$ and

$$\bar{\Delta} = -\$27\text{ K} ,$$

$$f(T, 4, 2) = \$122.294\text{ K} .$$

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*If $M > 2$, the transformed matrix would be

$$T' = \begin{bmatrix} 4 & 0 & 0 \\ 4 & 4 & 0 \\ 4 & 4 & 4 \end{bmatrix} .$$

Hence,

$$B = 0.55(\$99.15\ K + \$71.558\ K) + 0.45(\$122.294\ K - \$27\ K) = \$136.771\ K$$

$$\bar{B} = \$122.294\ K$$

and the job should be bid because $B > \bar{B}$.

The procedures used in the preceding examples can be summarized into the following steps:

1) Calculate N = total bid opportunities for year minus number of the current bid opportunity.

2) Once the job duration, t_k, is known, transform the T matrix as follows:

   a) Calculate $T'_{11} = \max\left(0, T_{11} - t_k\right)$.

   b) If $t_k - T_{11} > 0$, calculate $T'_{21} = \max\left[0, 4 - \left(t_k - T_{11}\right)\right]$; otherwise, go to step 2) d).

   c) If $t_k - 4 - T_{11} > 0$, calculate $T'_{31} = \max\left[0, 8 - \left(t_k - T_{11}\right)\right]$; otherwise, go to step 2) d).

   d) Reorder each row in descending order.

   e) If at least one element of the top row is not zero, go to step 3); otherwise, strike out the top row of T' and see if $M > 2$. If so, add a row of fours to the bottom of T, making it again square and go to step 2) f). If $M \leq 2$, go directly to step 2) f).

   f) Set $M' = M - 1$.

3) Calculate the duration of the job done in each year as follows:

   a) If $t_k < T_{11}$, $k_1 = t_k$; otherwise, $k_1 = T_{11}$.

   b) If $t_k < T_{11}$, $k_2 = 0$; otherwise, $k_2 = \max\left(4, t_k - T_{11}\right)$.

   c) If $t_k - T_{11} \leq 4$, $k_3 = 0$; otherwise, $k_3 = t_k - T_{11} - 4$.

4) Calculate Δ conditional on bidding and winning from

$$\Delta = R_k\left[k_1(0.9)^M + k_2(0.9)^{M-1} + k_3(0.9)^{M-2}\right] - C_{Bk} \quad .$$

5) Look up $f(T', N, M)$ from the tables in Appendix A. If M' was calculated, use $f_m(T', M')$, the annual summary tables, instead of $f(T', N, M)$.

6) Calculate $\bar{\Delta}$ conditional on bidding and losing from $\bar{\Delta} = - C_{Bk}$

7) Look up $f(T, N, M)$ from the tables in Appendix A.

8) Calculate B and $\bar{B}$ as follows:

$$B = 0.55\left[\Delta + \left\{f(T', N, M) \text{ or } f_m(T', M')\right\}\right] + 0.45\left[\bar{\Delta} + f(T, N, M)\right];$$

$$\bar{B} = f(T, N, M).$$

9) Bid if $B > \bar{B}$; otherwise, do not bid.

The above steps make it possible for anyone to choose the optimal course of action with a minimum of calculation and search through tables, regardless of the company's state and the job that is being considered.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The preceding chapters have presented some of the background which makes the formulation of decision theoretic solutions for large scale problems a desirable undertaking, a description of the bidding-work-loading game which is a simplistic large scale sequential decision problem, and the formulation of the dynamic programming recursion relationships which can be used by all players to ascertain optimal decisions for all possible states of their hypothetical "company". The recursion relationships have been exercised to generate tables of partial solutions (presented in Appendix A) and examples illustrating the use of these tables have been presented.

A key conclusion resulting from these is that it is possible to solve large scale sequential decision problems and present the results in a "reasonable" volume of data by leaving some of the calculations to the decision maker. Another conclusion is that, for the bidding-work-loading game, the choice of a method for presenting the unused time matrix, T, leads to substantial savings in the number of states which must be enumerated. Allowing all possible combinations of the elements, with each element taking on five different values, there would be 5^9 possible combinations. Some of these are clearly not feasible, because it is not possible to have all elements in any row be less than four if all elements in the row above them are greater than zero; i.e.,

there cannot be less than 4 quarters of work capacity in all work channels of a subsequent year if there is still work capacity left in all channels of a preceding year. This constraint alone eliminates a large number of combinations. Adding the restriction that the elements in each row must be arranged in decreasing order further reduces the number of possible combinations, leaving only 293 that are feasible and unique. While this result happens because of the nature of the bidding-work-loading game structure, the point must be made that there are probably similar properties associated with most large scale decision problems which can be exploited to make the solution formulation more tractable.

The example problems presented in Chapter IV yielded the same decision, bid the job. The company states and jobs were chosen arbitrarily, but nevertheless the action dictated by the solution prompts the question of whether there exist one or two sets of criteria which could be checked to see if the job should be bid or not. This is a possible follow-on effort.

The bidding-work-loading game solution has been presented here in tabular form. Clearly, it would be possible to store these tables in the memory of a computer and write an interactive computer program for a time sharing terminal which would perform the calculations that must now be done by hand. It is recommended that this approach be pursued if the game is to be used extensively in classroom exercises and the solution is to be used for grading the results. The notion of an interactive computer program prompts thoughts of incorporating decision

theoretic solutions into computerized management information systems as a logical extension of the methodology. These visions are, however, left for future endeavors.

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APPENDIX A

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 0 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	.630	.630			
T13=1		.630			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	2.974	2.974	2.974		
T13=1		2.974	2.974		
T13=2			2.974		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	6.712	6.712	6.712	6.712	
T13=1		6.712	6.712	6.712	
T13=2			6.712	6.712	
T13=3				6.712	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	10.317	10.317	10.317	10.317	10.317
T13=1		10.317	10.317	10.317	10.317
T13=2			10.317	10.317	10.317
T13=3				10.317	10.317
T13=4					10.317

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 1 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	1.215	1.260			
T13=1		1.260			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	4.993	5.145	5.947		
T13=1		5.145	5.947		
T13=2			5.947		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	10.359	10.591	11.581	13.424	
T13=1		10.591	11.581	13.424	
T13=2			11.581	13.424	
T13=3				13.424	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	15.361	15.597	16.718	18.651	20.634
T13=1		15.597	16.718	18.651	20.634
T13=2			16.718	18.651	20.634
T13=3				18.651	20.634
T13=4					20.634

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 2 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	1,758	1,887			
T13=1		1,890			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	6,476	6,882	8,569		
T13=1		6,893	8,621		
T13=2			8,921		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	12,704	13,222	15,198	18,668	
T13=1		13,235	15,254	18,764	
T13=2			15,580	19,210	
T13=3				20,136	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	18,175	18,653	20,883	24,580	28,236
T13=1		18,667	20,935	24,667	28,324
T13=2			21,297	25,140	28,861
T13=3				26,093	29,860
T13=4					30,951

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 3 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	2,262	2,508			
T13=1		2,520			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	7,671	8,294	10,823		
T13=1		8,333	10,960		
T13=2			11,765		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	14,474	15,225	18,026	22,624	
T13=1		15,262	18,186	22,871	
T13=2			18,987	23,961	
T13=3				26,125	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	20,092	20,785	23,873	28,744	33,385
T13=1		20,821	24,030	28,969	33,610
T13=2			24,939	30,142	34,952
T13=3				32,405	37,353
T13=4					39,861

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 4 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	2.731	3.120			
T13=1		3.149			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	8.672	9.516	12.793		
T13=1		9.584	13.044		
T13=2			14.391		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	15.815	16.851	20.288	25.728	
T13=1		16.929	20.582	26.116	
T13=2			21.976	27.866	
T13=3				31.162	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	21.548	22.405	26.203	31.873	37.007
T13=1		22.480	26.451	32.239	37.353
T13=2			27.979	34.084	39.445
T13=3				37.535	43.133
T13=4					46.831

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 5 AID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	3.165	3.722			
T13=1		3.777			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	9.512	10.411	14.504		
T13=1		10.724	14.892		
T13=2			16.776		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	16.875	18.188	22.244	28.214	
T13=1		18.328	22.640	28.783	
T13=2			24.610	31.104	
T13=3				35.335	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	22.735	23.735	28.139	34.337	39.726
T13=1		23.835	28.487	34.838	40.176
T13=2			30.600	37.305	42.942
T13=3				41.690	47.579
T13=4					52.077

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 6 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	3.569	4.312			
T13=1		4.403			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	10.218	11.595	15.984		
T13=1		11.770	16.535		
T13=2			18.980		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	17.793	19.306	23.932	30.305	
T13=1		19.526	24.459	31.003	
T13=2			26.926	33.890	
T13=3				38.797	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	23.709	24.891	29.761	36.386	41.929
T13=1		25.033	30.237	37.008	42.449
T13=2			32.903	40.015	45.774
T13=3				45.125	51.131
T13=4					54.081

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 7 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	3,944	4,889			
T13=1		5,026			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	10,814	12,484	17,291		
T13=1		12,736	17,999		
T13=2			20,991		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	18,588	20,282	25,386	32,107	
T13=1		20,574	26,073	32,947	
T13=2			29,019	36,290	
T13=3				41,772	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	24,514	25,905	31,177	38,102	43,751
T13=1		26,106	31,760	38,857	44,365
T13=2			34,971	42,360	48,156
T13=3				48,007	54,048
T13=4					59,289

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 8 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	4.297	5.452			
T13=1		5.647			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	11.378	13.288	18.482		
T13=1		13.636	19.313		
T13=2			22.813		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	19.277	21.176	26.638	33.661	
T13=1		21.529	27.510	34.648	
T13=2			30.925	38.420	
T13=3				44.333	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	25.187	26.804	32.454	39.592	45.283
T13=1		27.077	33.118	40.443	45.996
T13=2			36.824	44.445	50.244
T13=3				50.491	56.516
T13=4					61.938

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 9 RID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	4.623	5.999			
T13=1		6.263			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	11.914	14.019	19.571		
T13=1		14.478	20.540		
T13=2			24.466		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	19.877	21.998	27.732	35.003	
T13=1		22.429	28.793	36.148	
T13=2			32.660	40.337	
T13=3				46.575	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	25.755	27.610	33.607	40.934	46.653
T13=1		27.968	34.374	41.842	47.412
T13=2			38.490	46.292	52.086
T13=3				52.697	58.684
T13=4					64.207

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 10 BID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	4.943	6.530			
T13=1		6.874			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	12.422	14.687	20.569		
T13=1		15.271	21.684		
T13=2			25.968		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	20.401	22.755	28.733	36.166	
T13=1		23.279	29.945	37.479	
T13=2			34.241	42.056	
T13=3				48.595	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	26.272	28.353	34.650	42.138	47.875
T13=1		28.818	35.535	43.130	48.706
T13=2			39.998	47.929	53.723
T13=3				54.648	60.596
T13=4					66.189

EXPECTED INCREASE IN ASSETS, 1000'S OF $
0 YEARS AND 11 RID OPPORTUNITIES REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	5,252	7,047			
T13=1		7,479			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	12,905	15,301	21,486		
T13=1		16,020	22,748		
T13=2			27,336		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	20,863	23,455	29,671	37,209	
T13=1		24,085	30,984	38,670	
T13=2			35,684	43,602	
T13=3				50,404	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	26,768	29,052	35,598	43,219	48,969
T13=1		29,635	36,608	44,317	49,894
T13=2			41,402	49,400	55,188
T13=3				56,372	62,294
T13=4					67,933

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 0 YEARS REMAINING

T= 1 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	3.707	4.569			
T13=1		4.698			

T= 2 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	10.356	11.858	16.362		
T13=1		12.094	16.983		
T13=2			19.648		

T= 3 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	17.911	19.504	24.233	30.653	
T13=1		19.759	24.867	31.426	
T13=2			27.546	34.471	
T13=3				39.481	

T= 4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	23.732	25.042	30.018	36.627	42.103
T13=1		25.233	30.537	37.297	42.669
T13=2			33.429	40.504	46.148
T13=3				45.677	51.551
T13=4					56.425

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 0 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	28.446	47.233	44.817	40.871	48.096
T22=1		31.923	49.431	48.096	53.479
T22=2			40.871	53.479	51.704
T22=3				51.704	57.464
T22=4					60.677

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	47.233	49.431	53.479	57.464	60.677
T12=1	42.103	42.669	46.148	51.551	56.425

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	60.677	56.425			
T13=1		56.425			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	30.586	48.269	46.227	42.074	49.554
T22=1		33.952	50.492	49.554	54.570
T22=2			42.074	54.570	53.361
T22=3				53.361	59.136
T22=4					62.215

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	48.269	50.492	54.570	59.136	62.215
T12=1	42.103	42.669	46.148	51.551	56.425
T12=2	42.103	42.669	46.148	51.551	56.425

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	62.215	56.425	56.425		
T13=1		56.425	56.425		
T13=2			56.425		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 0 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	32,518	50,034	47,711	43,874	51,023
T22=1		35,291	51,670	51,023	55,826
T22=2			43,874	55,826	54,874
T22=3				54,874	60,485
T22=4					63,858

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	50,034	51,670	55,826	60,485	63,858
T12=1	42,428	42,957	46,322	51,551	56,425
T12=2	42,428	42,957	46,322	51,551	56,425
T12=3	42,428	42,957	46,322	51,551	56,425

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	63,858	56,425	56,425	56,425	
T13=1		56,425	56,425	56,425	
T13=2			56,425	56,425	
T13=3				56,425	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	32,784	50,798	47,773	43,678	51,074
T22=1		35,160	52,085	51,074	55,955
T22=2			43,678	55,955	55,336
T22=3				55,336	60,966
T22=4					64,500

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	50,798	52,085	55,955	60,966	64,500
T12=1	43,208	43,736	46,986	52,032	56,705
T12=2	43,208	43,736	46,986	52,032	56,705
T12=3	43,208	43,736	46,986	52,032	56,705
T12=4	43,208	43,736	46,986	52,032	56,705

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	64,500	56,705	56,705	56,705	56,705
T13=1		56,705	56,705	56,705	56,705
T13=2			56,705	56,705	56,705
T13=3				56,705	56,919
T13=4					58,327

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 1 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	31.400	50.445	49.525	45.530	52.848
T22=1		36.111	53.664	52.848	58.068
T22=2			45.530	58.068	55.476
T22=3				55.476	61.166
T22=4					63.338

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	50.445	53.664	58.068	61.166	63.338
T12=1	54.668	56.913	60.298	63.221	65.521

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	63.338	65.521			
T13=1		62.306			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	34.302	52.289	51.854	47.411	55.271
T22=1		38.603	55.495	55.271	59.927
T22=2			47.411	59.927	58.261
T22=3				58.261	63.978
T22=4					65.995

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	52.289	55.495	59.927	63.978	65.995
T12=1	55.612	57.997	61.653	65.395	67.873
T12=2	56.322	58.608	62.243	66.030	68.503

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	65.995	67.873	68.503		
T13=1		64.794	64.794		
T13=2			64.794		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 1 AID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	37,897	55,266	54,167	50,204	57,642
T22=1		41,381	57,563	57,642	62,224
T22=2			50,204	62,224	60,933
T22=3				60,933	66,591
T22=4					69,066

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	55,266	57,563	62,224	66,591	69,066
T12=1	56,909	58,852	62,839	66,923	69,801
T12=2	57,544	59,422	63,390	67,555	70,419
T12=3	58,389	60,141	64,075	68,226	71,120

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	69,066	69,801	70,419	71,120	
T13=1		67,034	67,034	67,106	
T13=2			67,034	67,106	
T13=3				67,106	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	40,813	58,656	56,870	52,656	60,228
T22=1		43,904	60,536	60,228	64,687
T22=2			52,656	64,687	63,821
T22=3				63,821	69,317
T22=4					71,955

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	58,656	60,536	64,687	69,317	71,955
T12=1	57,886	59,453	63,234	67,772	71,051
T12=2	58,378	59,903	63,673	68,290	71,556
T12=3	59,073	60,481	64,219	68,808	72,103
T12=4	59,338	60,708	64,431	69,065	72,341

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	71,955	71,051	71,556	72,103	72,341
T13=1		68,925	68,925	68,970	69,224
T13=2			68,925	68,970	69,224
T13=3				68,970	69,321
T13=4					69,961

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 2 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	33,614	52,557	52,477	48,463	55,832
T22=1		39,116	56,604	55,832	60,940
T22=2			48,463	60,940	57,838
T22=3				57,838	63,484
T22=4					65,004

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	52,557	56,604	60,940	63,484	65,004
T12=1	62,377	65,471	68,781	70,519	71,626

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	65,004	71,626			
T13=1		72,047			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	36,624	54,761	55,160	50,620	58,629
T22=1		41,518	58,585	58,629	63,098
T22=2			50,620	63,098	61,130
T22=3				61,130	64,811
T22=4					68,200

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	54,761	58,585	63,098	66,811	68,200
T12=1	64,101	67,502	71,209	73,978	75,253
T12=2	65,525	68,818	72,534	75,427	76,700

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	68,200	75,253	76,700		
T13=1		75,346	76,153		
T13=2			76,487		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 2 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	41,009	58,179	57,743	53,437	61,416
T22=1		44,838	61,111	61,416	65,879
T22=2			53,637	65,879	64,367
T22=3				64,367	70,043
T22=4					71,980

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	58,179	61,111	65,879	70,043	71,980
T12=1	46,191	49,097	73,366	76,587	78,279
T12=2	47,514	70,347	74,627	78,055	79,737
T12=3	49,384	71,900	76,185	79,690	81,456

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	71,980	78,279	79,737	81,456	
T13=1		78,140	79,006	79,868	
T13=2			79,312	80,157	
T13=3				80,510	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	45,092	62,855	61,885	57,673	65,283
T22=1		48,781	65,175	65,283	69,514
T22=2			57,673	69,514	68,422
T22=3				68,422	73,995
T22=4					76,138

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	62,855	65,175	69,514	73,995	76,138
T12=1	48,229	70,744	74,792	78,549	80,670
T12=2	69,368	71,840	75,921	79,936	82,054
T12=3	70,984	73,139	77,259	81,366	83,600
T12=4	72,382	74,400	78,428	82,675	84,987

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	76,138	80,670	82,054	83,600	84,987
T13=1		80,156	81,043	81,950	82,721
T13=2			81,301	82,177	82,904
T13=3				82,456	83,164
T13=4					83,593

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 3 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	35,450	54,309	54,588	50,509	57,798
T22=1		41,439	58,880	57,798	62,938
T22=2			50,509	62,938	59,320
T22=3				59,320	64,935
T22=4					66,047

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	54,309	58,880	62,938	64,935	66,047
T12=1	67,207	70,741	73,981	75,141	75,689

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	66,047	75,689			
T13=1		80,766			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	38,381	56,587	57,293	52,892	60,686
T22=1		43,810	60,933	60,686	65,333
T22=2			52,892	65,333	62,814
T22=3				62,814	68,474
T22=4					69,490

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	56,587	60,933	65,333	68,474	69,490
T12=1	69,489	73,464	77,159	79,360	80,029
T12=2	71,384	75,268	79,008	81,400	82,068

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	69,490	80,029	82,068		
T13=1		84,457	86,175		
T13=2			87,072		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 3 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	43.149	60.289	60.253	56.148	63.883
T22=1		47.438	63.678	63.883	68.440
T22=2			54.148	68.440	66.386
T22=3				66.386	72.048
T22=4					73.682

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	60.289	63.478	68.440	72.048	73.682
T12=1	72.144	75.695	80.051	82.682	83.687
T12=2	73.956	77.429	81.845	84.788	85.778
T12=3	76.536	79.581	84.083	87.186	88.304

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	73.682	83.687	85.778	88.304	
T13=1		87.474	89.303	91.015	
T13=2			90.152	91.839	
T13=3				92.864	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	48.041	65.537	65.126	61.247	68.508
T22=1		52.509	68.575	68.508	73.032
T22=2			61.247	73.032	71.207
T22=3				71.207	76.817
T22=4					78.543

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	65.537	68.575	73.032	76.817	78.543
T12=1	75.252	78.487	82.633	85.728	87.053
T12=2	76.917	80.115	84.353	87.851	89.179
T12=3	79.247	82.005	86.384	90.083	91.580
T12=4	81.861	84.401	88.615	92.514	94.144

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	78.543	87.053	89.179	91.580	94.144
T13=1		89.773	91.650	93.388	94.826
T13=2			92.391	94.117	95.491
T13=3				95.004	96.292
T13=4					97.108

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 4 RID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	36,973	55,770	56,200	51,935	59,094
T22=1		43,302	60,704	59,094	64,332
T22=2			51,935	64,332	60,296
T22=3				60,296	65,886
T22=4					66,700

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	55,770	60,704	64,332	65,886	66,700
T12=1	70,604	74,351	77,378	78,241	78,524

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	66,700	78,524			
T13=1		87,395			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	39,861	58,105	58,931	54,556	62,082
T22=1		45,724	62,885	62,082	66,971
T22=2			54,556	66,971	63,847
T22=3				63,847	69,485
T22=4					70,319

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	58,105	62,885	66,971	69,485	70,319
T12=1	73,266	77,481	81,036	82,873	83,235
T12=2	75,395	79,527	83,194	85,278	85,640

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	70,319	83,235	85,640		
T13=1		91,371	93,860		
T13=2			95,307		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 4 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	44,959	41,783	42,260	58,108	65,648
T22=1		49,445	65,944	65,648	70,433
T22=2			58,108	70,433	67,817
T22=3				67,817	73,471
T22=4					74,826

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	61,983	65,944	70,433	73,471	74,826
T12=1	76,089	80,218	84,400	86,616	87,228
T12=2	78,204	82,202	84,550	89,137	89,737
T12=3	81,265	84,709	89,299	92,079	92,824

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	74,826	87,228	89,737	92,824	
T13=1		94,587	97,225	99,652	
T13=2			98,629	101,039	
T13=3				102,770	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	50,597	67,725	67,837	63,947	71,070
T22=1		55,588	71,527	71,070	75,807
T22=2			63,947	75,807	73,284
T22=3				73,284	78,884
T22=4					80,382

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	67,725	71,527	75,807	78,884	80,382
T12=1	80,012	83,768	87,944	90,484	91,307
T12=2	82,049	85,773	90,053	93,128	93,955
T12=3	84,897	88,140	92,646	95,967	96,983
T12=4	88,551	91,557	95,870	99,402	100,546

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	80,382	91,307	93,955	96,983	100,546
T13=1		97,424	100,109	102,538	104,727
T13=2			101,414	103,847	105,991
T13=3				105,424	107,458
T13=4					108,991

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 5 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	38.332	57.086	57.482	52.931	59.987
T22=1		44.796	62.168	59.987	65.304
T22=2			52.931	65.304	60.939
T22=3				60.939	64.513
T22=4					67.130

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	57.086	62.168	65.304	66.513	67.130
T12=1	73.344	77.131	79.789	80.443	80.598

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	67.130	80.598			
T13=1		92.237			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	41.189	59.463	60.298	55.773	63.106
T22=1		47.322	64.511	63.106	68.168
T22=2			55.773	68.168	64.542
T22=3				64.542	70.194
T22=4					70.957

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	59.463	64.511	68.168	70.194	70.957
T12=1	76.343	80.723	83.951	85.303	85.489
T12=2	78.526	82.869	86.240	87.906	88.113

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	70.957	85.489	88.113		
T13=1		96.425	99.483		
T13=2			101.351		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 5 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	46,608	63,586	64,019	59,628	67,015
T22=1		51,513	67,934	67,015	71,974
T22=2			59,628	71,974	68,918
T22=3				68,918	74,566
T22=4					75,771

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	63,586	67,934	71,974	74,566	75,771
T12=1	79,499	83,906	87,796	89,509	89,871
T12=2	81,660	85,988	90,075	92,183	92,542
T12=3	84,849	88,697	93,083	95,452	95,919

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	75,771	89,871	92,542	95,919	
T13=1		99,822	103,057	105,996	
T13=2			104,904	107,856	
T13=3				110,197	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	52,811	69,722	70,152	66,014	73,106
T22=1		58,127	74,073	73,106	77,972
T22=2			66,014	77,972	75,025
T22=3				75,025	80,613
T22=4					81,894

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	69,722	74,073	77,972	80,613	81,894
T12=1	83,996	88,139	92,127	94,008	94,605
T12=2	86,140	90,292	94,455	96,874	97,412
T12=3	89,106	92,844	97,326	100,083	100,752
T12=4	93,344	96,774	101,147	104,263	105,077

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	81,894	94,605	97,412	100,752	105,077
T13=1		103,255	106,542	109,475	112,399
T13=2			108,340	111,306	114,227
T13=3				113,510	116,331
T13=4					118,696

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 6 AID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	39.556	58.273	58.509	53.625	60.609
T22=1		45.994	63.342	60.609	65.982
T22=2			53.625	65.982	61.372
T22=3				61.372	66.928
T22=4					67.444

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	58.273	63.342	65.982	66.928	67.444
T12=1	75.694	79.379	81.666	82.169	82.249

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	67.444	82.249			
T13=1		95.851			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	42.430	60.727	61.436	56.662	63.856
T22=1		48.652	65.863	63.856	69.041
T22=2			56.662	69.041	65.107
T22=3				65.107	70.767
T22=4					71.474

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	60.727	65.863	69.041	70.767	71.474
T12=1	79.099	83.434	86.232	87.101	87.197
T12=2	81.343	85.688	88.660	89.851	89.959

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	71.474	87.197	89.959		
T13=1		100.166	103.671		
T13=2			105.809		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 6 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	48.108	65.101	65.553	60.898	68.194
T22=1		53.095	69.672	68.194	73.221
T22=2			60.898	73.221	69.892
T22=3				69.892	75.529
T22=4					76.643

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	65.101	69.672	73.221	75.529	76.643
T12=1	82.642	87.137	90.543	91.732	91.980
T12=2	84.860	89.328	92.967	94.498	94.711
T12=3	88.149	92.272	96.264	98.103	98.388

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	76.643	91.980	94.711	98.388	
T13=1		103.807	107.379	110.762	
T13=2			109.529	112.929	
T13=3				115.697	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	54.736	71.543	72.129	67.728	74.805
T22=1		60.219	76.257	74.805	79.770
T22=2			67.728	79.770	76.456
T22=3				76.456	82.033
T22=4					83.124

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	71.543	76.257	79.770	82.033	83.124
T12=1	87.510	91.948	95.530	96.925	97.347
T12=2	89.777	94.272	98.085	99.928	100.316
T12=3	92.907	97.059	101.268	103.394	103.894
T12=4	97.412	101.285	105.577	108.045	108.609

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	83.124	97.347	100.316	103.894	108.609
T13=1		107.758	111.375	114.737	118.344
T13=2			113.544	116.946	120.591
T13=3				119.622	123.177
T13=4					126.300

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 7 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	40.659	59.342	59.334	54.109	61.044
T22=1		46.955	64.283	61.044	66.454
T22=2			54.109	66.454	61.702
T22=3				61.702	67.244
T22=4					67.705

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	59.342	64.283	66.454	67.244	67.705
T12=1	77.723	81.228	83.180	83.573	83.623

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	67.705	83.623			
T13=1		98.713			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	43.589	61.904	62.383	57.313	64.449
T22=1		49.758	66.986	64.449	69.706
T22=2			57.313	69.706	65.591
T22=3				65.591	71.237
T22=4					71.931

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	61.904	66.986	69.706	71.237	71.931
T12=1	81.565	85.710	88.038	88.570	88.630
T12=2	83.884	88.085	90.614	91.364	91.419

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	71.931	88.630	91.419		
T13=1		103.105	106.928		
T13=2			109.243		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 7 AID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	49.474	66.527	66.886	61.993	69.216
T22=1		54.479	71.185	69.216	74.296
T22=2			61.993	74.296	70.788
T22=3				70.788	76.416
T22=4					77.445

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	66.527	71.185	74.296	76.416	77.445
T12=1	85.527	89.952	92.760	93.638	93.831
T12=2	87.817	92.268	95.340	96.436	96.604
T12=3	91.243	95.478	98.948	100.246	100.449

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	77.445	93.831	96.604	100.449	
T13=1		107.042	110.887	114.545	
T13=2			113.194	116.858	
T13=3				119.957	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	56.421	73.207	73.808	69.157	76.206
T22=1		61.942	78.120	76.206	81.260
T22=2			69.157	81.260	77.624
T22=3				77.624	83.192
T22=4					84.124

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	73.207	78.120	81.260	83.192	84.124
T12=1	90.654	95.344	98.284	99.382	99.703
T12=2	93.050	97.759	101.065	102.511	102.809
T12=3	96.357	100.929	104.585	106.224	106.625
T12=4	101.162	105.413	109.408	111.294	111.735

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	84.124	99.703	102.809	106.625	111.735
T13=1		111.555	115.314	118.934	123.034
T13=2			117.704	121.351	125.591
T13=3				124.339	128.562
T13=4					132.297

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 8 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	41.653	60.305	59.995	54.481	61.366
T22=1		47.726	65.038	61.366	66.784
T22=2			54.481	66.784	61.955
T22=3				61.955	67.498
T22=4					67.921

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	60.305	65.038	66.784	67.498	67.921
T12=1	79.488	82.773	84.438	84.747	84.778

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	67.921	84.778			
T13=1		101.049			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	44.669	63.001	63.170	57.893	64.988
T22=1		50.677	67.918	64.988	70.264
T22=2			57.893	70.264	66.039
T22=3				66.039	71.671
T22=4					72.333

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	63.001	67.918	70.264	71.671	72.333
T12=1	83.771	87.627	89.488	89.816	89.853
T12=2	86.183	90.137	92.216	92.678	92.713

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	72.333	89.853	92.713		
T13=1		105.503	109.607		
T13=2			112.054		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 8 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	50.717	47.869	68.039	62.974	70.156
T22=1		55.686	72.497	70.156	75.272
T22=2			62.974	75.272	71.609
T22=3				71.609	77.228
T22=4					78.178

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	67.849	72.497	75.272	77.228	78.178
T12=1	88.165	92.396	94.661	95.355	95.504
T12=2	90.546	94.850	97.335	98.205	98.335
T12=3	94.140	98.353	101.229	102.220	102.386

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	78.178	95.504	98.335	102.386	
T13=1		109.778	113.799	117.795	
T13=2			116.245	120.238	
T13=3				123.542	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	57.903	74.727	75.228	70.336	77.355
T22=1		63.360	79.703	77.355	82.483
T22=2			70.336	82.483	78.579
T22=3				78.579	84.137
T22=4					84.983

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	74.727	79.703	82.483	84.137	84.983
T12=1	93.510	98.083	100.640	101.514	101.767
T12=2	96.061	100.803	103.606	104.759	104.985
T12=3	99.548	104.195	107.403	108.750	109.069
T12=4	104.593	109.155	112.692	114.147	114.521

4 T12 T13
T= 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	84.983	101.757	104.985	109.069	114.521
T13=1		114.849	118.790	122.580	127.028
T13=2			121.331	125.136	129.758
T13=3				128.328	132.960
T13=4					137.169

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 9 RID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	42.548	61.172	60.525	54.779	61.625
T22=1		48.344	65.643	61.625	67.044
T22=2			54.779	67.044	62.167
T22=3				62.167	67.717
T22=4					68.101

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	61.172	65.643	67.044	67.717	68.101
T12=1	81.033	84.081	85.510	85.730	85.750

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	68.101	85.750			
T13=1		102.992			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	45.676	64.020	63.822	58.429	65.485
T22=1		51.440	68.690	65.485	70.779
T22=2			58.429	70.779	66.451
T22=3				66.451	72.069
T22=4					72.687

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	64.020	68.690	70.779	72.069	72.687
T12=1	85.743	89.249	90.666	90.871	90.894
T12=2	88.267	91.905	93.554	93.839	93.861

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	72.687	90.894	93.861		
T13=1		107.591	111.906		
T13=2			114.435		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 9 RID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	51,850	69,129	69,035	63,875	71,017
T22=1		56,733	73,630	71,017	76,166
T22=2			63,875	76,166	72,360
T22=3				72,360	77,970
T22=4					78,849

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	69,12°	73,630	76,166	77,970	78,849
T12=1	90,571	94,514	96,344	96,888	97,003
T12=2	93,060	97,117	99,127	99,810	99,910
T12=3	96,852	100,929	103,263	104,064	104,199

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	78,849	97,003	99,910	104,199	
T13=1		112,168	116,382	120,607	
T13=2			118,920	123,169	
T13=3				126,696	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	59,212	76,116	76,427	71,311	78,299
T22=1		64,529	81,043	78,299	83,484
T22=2			71,311	83,484	79,395
T22=3				79,395	84,954
T22=4					85,724

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	76,116	81,043	83,484	84,954	85,724
T12=1	96,095	100,522	102,668	103,360	103,544
T12=2	98,825	103,454	105,812	106,716	106,887
T12=3	102,535	107,194	109,912	111,012	111,266
T12=4	107,762	112,521	115,528	116,747	117,058

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	85,724	103,544	106,887	111,266	117,058
T13=1		117,712	121,818	125,855	130,615
T13=2			124,518	128,548	133,462
T13=3				131,945	136,827
T13=4					141,368

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 10 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	43.355	61.954	60.950	55.019	61.832
T22=1		48.840	66.129	61.832	67.252
T22=2			55.019	67.252	62.351
T22=3				62.351	67.906
T22=4					68.250

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	61.954	66.129	67.252	67.906	68.250
T12=1	82.391	85.214	86.424	86.575	86.589

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	68.250	86.589			
T13=1		104.634			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	46.612	64.967	64.406	58.921	65.940
T22=1		52.083	69.330	65.940	71.251
T22=2			58.921	71.251	66.829
T22=3				66.829	72.435
T22=4					73.005

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	64.967	69.330	71.251	72.435	73.005
T12=1	87.507	90.627	91.655	91.804	91.820
T12=2	90.161	93.439	94.694	94.869	94.883

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	73.005	91.820	94.883		
T13=1		109.400	113.962		
T13=2			116.598		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 10 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	52.897	70.311	69.955	64.701	71.806
T22=1		57.687	74.618	71.806	76.984
T22=2			64.701	76.984	73.046
T22=3				73.046	78.648
T22=4					79.461

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	70.311	74.618	76.984	78.648	79.461
T12=1	92.760	96.347	97.826	98.281	98.377
T12=2	95.376	99.107	100.728	101.281	101.365
T12=3	99.385	103.238	105.131	105.778	105.887

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	79.461	98.377	101.365	105.887	
T13=1		114.366	118.716	123.193	
T13=2			121.329	125.834	
T13=3				129.520	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	60.375	77.387	77.436	72.130	79.099
T22=1		65.492	82.175	79.099	84.321
T22=2			72.130	84.321	80.104
T22=3				80.104	85.663
T22=4					86.365

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	77.387	82.175	84.321	85.663	86.365
T12=1	98.428	102.617	104.413	104.957	105.094
T12=2	101.357	105.760	107.722	108.422	108.551
T12=3	105.321	109.862	112.148	113.043	113.245
T12=4	110.730	115.532	118.083	119.097	119.353

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	86.365	105.094	108.551	113.245	119.353
T13=1		120.277	124.533	128.782	133.875
T13=2			127.376	131.612	136.858
T13=3				135.226	140.408
T13=4					145.148

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 11 RID OPPORTUNITIES REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	44,082	62,658	61,291	55,213	62,006
T22=1		49,237	66,519	62,006	67,432
T22=2	—		55,213	67,432	62,509
T22=3				62,509	68,068
T22=4					68,373

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	62,658	66,519	67,432	68,068	68,373
T12=1	83,591	86,198	87,206	87,311	87,321

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	68,373	87,321			
T13=1		106,060			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	47,482	65,847	64,947	59,372	66,358
T22=1		52,679	69,915	66,358	71,683
T22=2			59,372	71,683	67,176
T22=3				67,176	72,772
T22=4					73,296

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	65,847	69,915	71,683	72,772	73,296
T12=1	89,085	91,803	92,555	92,663	92,675
T12=2	91,883	94,775	95,679	95,804	95,814

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	73,296	92,675	95,814		
T13=1		110,969	115,786		
T13=2			118,545		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
1 YEARS AND 11 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	53,684	71,417	70,805	65,457	72,526
T22=1		58,571	75,532	72,526	77,731
T22=2			65,457	77,731	73,673
T22=3				73,673	79,267
T22=4					80,018

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	71,417	75,532	77,731	79,267	80,018
T12=1	94,748	97,933	99,187	99,570	99,650
T12=2	97,505	100,854	102,195	102,660	102,730
T12=3	101,749	105,307	106,842	107,389	107,485

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	80,018	99,650	102,730	107,485	
T13=1		116,368	120,895	125,567	
T13=2			123,601	128,289	
T13=3				132,168	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	61,411	78,549	78,287	72,849	79,796
T22=1		66,307	83,129	79,796	85,050
T22=2			72,849	85,050	80,721
T22=3				80,721	86,280
T22=4					86,922

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	78,549	83,129	85,050	86,280	86,922
T12=1	100,530	104,418	105,915	106,369	[illegible]485
T12=2	103,673	107,767	109,376	109,917	110,014
T12=3	107,912	112,233	114,145	114,874	115,035
T12=4	113,498	118,210	120,371	121,208	121,417

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	86,922	106,485	110,014	115,035	121,417
T13=1		122,562	126,994	131,476	136,818
T13=2			129,987	134,433	139,949
T13=3				138,223	143,710
T13=4					148,685

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 1 YEARS REMAINING

1 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	39,626	58,142	58,153	53,153	60,057
T22=1		45,801	62,970	60,057	65,371
T22=2			53,153	65,371	60,819
T22=3				60,819	66,321
T22=4					66,843

1 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	58,142	62,970	65,371	66,321	66,843
T12=1	75,691	79,165	81,287	81,763	81,860

1 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	66,843	81,860			
T13=1		95,638			

2 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	42,544	60,663	61,130	56,260	63,401
T22=1		48,524	65,566	63,401	68,520
T22=2			56,260	68,520	64,640
T22=3				64,640	70,227
T22=4					70,931

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	60,663	65,566	68,520	70,227	70,931
T12=1	79,322	83,363	85,849	86,657	86,776
T12=2	81,600	85,673	88,337	89,367	89,491

2 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	70,931	86,776	89,491		
T13=1		99,927	103,471		
T13=2			105,596		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 1 YEARS REMAINING

3 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	48,222	65,129	69,402	60,708	67,922
T22=1		53,088	69,549	67,922	72,898
T22=2			60,708	72,898	69,581
T22=3				69,581	75,157
T22=4					76,231

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	65,129	69,549	72,898	75,157	76,231
T12=1	83,090	87,330	90,344	91,497	91,766
T12=2	85,340	89,581	92,808	94,227	94,476
T12=3	88,695	92,671	96,233	97,858	98,173

3 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	76,231	91,766	94,476	98,173	
T13=1		103,740	107,318	110,745	
T13=2			109,435	112,869	
T13=3				115,670	

4 0 0
T= 4 T22 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	54,844	71,558	71,992	67,506	74,495
T22=1		60,153	76,154	74,495	79,439
T22=2			67,506	79,439	76,053
T22=3				76,053	81,572
T22=4					87,616

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	71,558	76,154	79,439	81,572	82,616
T12=1	87,946	92,248	95,447	96,805	97,225
T12=2	90,277	94,668	98,078	99,820	100,214
T12=3	93,486	97,626	101,403	103,381	103,889
T12=4	98,036	101,997	105,894	108,112	108,695

4 T12 T13
T= 4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	82,616	97,225	100,214	103,889	108,695
T13=1		107,948	111,502	114,861	118,547
T13=2			113,661	117,040	120,808
T13=3				119,725	123,440
T13=4					126,710

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 0 BID OPPORTUNITIES REMAINING

T= 1 0 0
4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	78.304	126.710	126.710	126.710	128.796
T33=1		82.510	126.710	126.710	128.796
T33=2			85.517	126.710	128.796
T33=3				87.373	128.796
T33=4					88.044

T= 1 0 0
4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	97.020	100.725	103.314	104.323	104.590
T22=2	100.083	103.880	106.700	108.027	108.310
T22=3	102.875	106.512	109.570	111.048	111.396
T22=4	106.349	109.873	113.003	114.613	114.997

T= 1 T12 0
4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	106.349	109.873	113.003	114.613	114.997
T12=1	98.036	101.997	105.894	108.112	108.695

T= 1 0 0
4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	88.044	114.997	120.665	119.222	122.740
T22=1		113.241	123.931	122.740	126.432
T22=2			119.222	126.432	124.583
T22=3				124.583	128.384
T22=4					130.599

T= 1 T12 0
4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	114.997	123.931	126.432	128.384	130.599
T12=1	108.695	118.547	120.808	123.446	126.710

T= 1 T12 T13
4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	130.599	126.710			
T13=1		126.710			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 0 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	78,433	126,710	120,808	123,440	126,710
T33=1		82,989	120,808	123,440	126,710
T33=2			86,127	123,440	126,710
T33=3				88,050	126,710
T33=4					88,828

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	97,159	101,145	103,937	105,040	105,341
T22=2	100,148	104,225	107,257	108,697	109,010
T22=3	103,268	107,176	110,486	112,118	112,516
T22=4	106,458	110,253	113,635	115,403	115,840

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	106,458	110,253	113,635	115,403	115,840
T12=1	98,036	101,997	105,894	108,112	108,695
T12=2	98,036	101,997	105,894	108,112	108,695

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	88,828	115,840	122,373	120,618	124,429
T22=1		114,655	125,404	124,429	127,881
T22=2			120,618	127,881	126,287
T22=3				126,287	130,096
T22=4					132,099

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	115,840	125,404	127,881	130,096	132,099
T12=1	108,695	118,547	120,808	123,440	126,710
T12=2	108,695	118,547	120,808	123,440	126,710

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	132,099	126,710	126,710		
T13=1		126,710	126,710		
T13=2			126,710		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 0 MID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	79,147	126,710	126,710	123,440	126,710
T33=1		83,431	126,710	123,440	126,710
T33=2			86,787	123,440	126,710
T33=3				88,811	126,710
T33=4					89,675

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	97,048	101,129	104,098	105,277	105,606
T22=2	100,100	104,277	107,505	109,055	109,394
T22=3	103,288	107,282	110,818	112,580	113,015
T22=4	106,648	110,518	114,137	116,057	116,539

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	106,648	110,518	114,137	116,057	116,539
T12=1	98,036	101,997	105,894	108,112	108,695
T12=2	98,036	101,997	105,894	108,112	108,695
T12=3	98,036	101,997	105,894	108,112	108,695

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	89,675	116,539	123,251	121,565	125,379
T22=1		115,513	126,318	125,379	128,870
T22=2			121,565	128,870	127,369
T22=3				127,369	131,151
T22=4					133,338

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	116,539	126,318	128,870	131,151	133,338
T12=1	108,695	118,547	120,808	123,440	126,710
T12=2	108,695	118,547	120,808	123,440	126,710
T12=3	108,695	118,547	120,808	123,440	126,710

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	133,338	126,710	126,710	126,710	
T13=1		126,710	126,710	126,710	
T13=2			126,710	126,710	
T13=3				126,710	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 0 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	78,792	126,710	126,710	126,710	126,710
T33=1		83,208	126,710	126,710	126,710
T33=2			86,304	126,710	126,710
T33=3				88,462	126,710
T33=4					89,395

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	96,113	100,250	103,279	104,535	104,892
T22=2	98,924	103,152	106,422	108,057	108,412
T22=3	102,284	106,312	109,914	111,784	112,247
T22=4	105,892	109,783	113,477	115,529	116,046

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	105,892	109,783	113,477	115,529	116,046
T12=1	98,036	101,997	105,894	108,112	108,695
T12=2	98,036	101,997	105,894	108,112	108,695
T12=3	98,036	101,997	105,894	108,112	108,695
T12=4	98,036	101,997	105,894	108,112	108,695

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	89,395	116,046	122,809	121,158	124,970
T22=1		115,191	125,958	124,970	128,428
T22=2			121,158	128,428	127,183
T22=3				127,183	130,969
T22=4					133,340

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	116,046	125,958	120,428	130,969	133,340
T12=1	108,695	118,547	120,808	123,440	126,710
T12=2	108,695	118,547	120,808	123,440	126,710
T12=3	108,695	118,547	120,808	123,440	126,710
T12=4	108,695	118,547	120,808	123,440	126,710

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	133,340	126,710	126,710	126,710	126,710
T13=1		126,710	126,710	126,710	126,710
T13=2			126,710	126,710	126,819
T13=3				126,710	127,504
T13=4					128,796

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 1 BID OPPORTUNITIES REMAINING

		1 0 0			
		Y= 4 0 0			
		4 Y32 Y33			
	Y32=0	Y32=1	Y32=2	Y32=3	Y32=4
Y33=0	81.396	135.761	135.761	135.741	136.730
Y33=1		85.370	135.761	135.741	136.730
Y33=2			88.270	135.741	136.730
Y33=3				90.039	136.730
Y33=4					90.578

		1 0 0			
		Y= 4 Y22 0			
		4 4 Y33			
	Y33=0	Y33=1	Y33=2	Y33=3	Y33=4
Y22=1	101.167	104.567	106.983	107.956	108.196
Y22=2	104.496	108.026	110.709	111.981	112.242
Y22=3	107.101	110.510	113.294	114.695	115.005
Y22=4	110.091	113.418	116.202	117.612	117.944

		1 Y12 0			
		Y= 4 4 0			
		4 4 Y33			
	Y33=0	Y33=1	Y33=2	Y33=3	Y33=4
Y12=0	110.091	113.418	116.202	117.612	117.944
Y12=1	110.996	114.302	117.172	118.625	118.969

		1 0 0			
		Y= 4 Y22 Y23			
		4 4 4			
	Y23=0	Y23=1	Y23=2	Y23=3	Y23=4
Y22=0	90.578	117.944	124.262	122.752	126.364
Y22=1		116.496	127.222	126.364	129.974
Y22=2			122.752	129.974	127.770
Y22=3				127.770	131.594
Y22=4					133.177

		1 Y12 0			
		Y= 4 4 Y23			
	Y23=0	Y23=1	Y23=2	Y23=3	Y23=4
Y12=0	117.944	127.222	129.974	131.594	133.177
Y12=1	118.969	126.931	129.106	130.832	132.790

		1 Y12 Y13			
		Y= 4 4 4			
		4 4 4			
	Y12=0	Y12=1	Y12=2	Y12=3	Y12=4
Y13=0	133.177	132.790			
Y13=1		130.599			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 1 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	82.081	130.599	129.106	130.832	132.790
T33=1		86.607	129.106	130.832	132.790
T33=2			89.669	130.832	132.790
T33=3				91.488	132.790
T33=4					92.143

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	101.936	105.760	108.349	109.326	109.567
T22=2	105.245	109.161	112.004	113.295	113.566
T22=3	108.311	112.098	115.174	116.634	116.978
T22=4	110.854	114.560	117.684	119.229	119.595

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	110.854	114.560	117.684	119.229	119.595
T12=1	111.291	114.850	117.949	119.539	119.926
T12=2	111.424	115.107	118.302	119.942	120.343

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	92.143	119.595	126.871	124.901	128.951
T22=1		118.671	129.475	128.951	132.181
T22=2			124.901	132.181	130.436
T22=3				130.436	134.256
T22=4					135.583

2 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	119.595	129.475	132.181	134.256	135.583
T12=1	119.926	128.823	131.111	133.047	134.886
T12=2	120.343	129.466	131.756	133.705	135.480

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	135.583	134.886	135.480		
T13=1		132.430	132.430		
T13=2			132.430		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 1 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	83.896	132.430	132.430	133.705	135.480
T33=1		88.023	132.430	133.705	135.480
T33=2			91.395	133.705	135.480
T33=3				93.353	135.480
T33=4					94.112

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	102.644	106.592	109.421	110.497	110.776
T22=2	106.070	110.118	113.229	114.667	114.973
T22=3	109.231	113.132	116.516	118.150	118.542
T22=4	111.969	115.775	119.223	120.970	121.394

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	111.969	115.775	119.223	120.970	121.394
T12=1	111.689	115.336	118.655	120.378	120.602
T12=2	111.799	115.566	118.987	120.764	121.203
T12=3	111.853	115.656	119.171	120.998	121.450

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	94.112	121.394	128.543	126.699	130.734
T22=1		120.341	131.217	130.734	134.029
T22=2			126.699	134.029	132.400
T22=3				132.400	136.213
T22=4					137.831

3 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	121.394	131.217	134.029	136.213	137.831
T12=1	120.802	129.979	132.508	134.643	136.579
T12=2	121.203	130.621	133.151	135.316	137.230
T12=3	121.450	131.020	133.575	135.757	137.691

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	137.831	136.579	137.230	137.691	
T13=1		134.185	134.185	134.185	
T13=2			134.185	134.185	
T13=3				134.185	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 1 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	85,688	134,185	134,185	134,185	137,691
T33=1		89,971	134,185	134,185	137,691
T33=2			92,950	134,185	137,691
T33=3				95,079	137,691
T33=4					95,906

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	103,813	107,793	110,657	111,816	112,122
T22=2	106,964	111,038	114,163	115,690	116,010
T22=3	110,346	114,256	117,479	119,428	119,848
T22=4	113,325	117,131	120,623	122,510	122,968

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	113,325	117,131	120,623	122,510	122,968
T12=1	111,594	115,313	118,768	120,648	121,115
T12=2	111,686	115,498	119,034	120,961	121,443
T12=3	111,728	115,569	119,180	121,151	121,643
T12=4	111,394	115,247	118,880	120,887	121,388

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	95,906	122,968	129,980	128,062	132,115
T22=1		121,933	132,798	132,115	135,404
T22=2			128,062	135,404	134,024
T22=3				134,024	137,824
T22=4					139,674

4 T12 0
T= 4 4 T23

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	122,968	132,798	135,404	137,824	139,674
T12=1	121,115	130,544	133,003	135,400	137,666
T12=2	121,443	131,069	133,526	135,953	138,199
T12=3	121,643	131,390	133,868	136,312	138,576
T12=4	121,388	131,224	133,705	136,197	138,479

4 T12 T13

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	139,674	137,666	138,199	138,576	138,479
T13=1		135,761	135,761	135,761	135,761
T13=2			135,761	135,761	135,810
T13=3				135,761	136,119
T13=4					136,730

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 2 BID OPPORTUNITIES REMAINING

		1	0	0	
	T=	4	0	0	
		4	T32	T33	

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	83.570	143,644	144.761	145,694	146,555
T33=1		87,359	144.761	145,694	146,555
T33=2			90.272	145,694	146,555
T33=3				92,00[illegible]	146,555
T33=4					92,485

		1	0	0	
	T=	4	T22	0	
		4	4	T33	

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	103,863	107,188	109,556	110,460	110,691
T22=2	107,019	110,576	113,241	114,431	114,693
T22=3	109,309	112,687	115,476	116,776	117,079
T22=4	112,441	115,378	118,011	119,357	119,646

		1	T12	0	
	T=	4	4	0	
		4	4	T33	

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	112,441	115,378	118,011	119,357	119,646
T12=1	118,936	121,846	124,162	125,239	125,468

		1	0	0	
	T=	4	T22	T23	
		4	4	4	

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	92,485	119,646	126,632	125,078	128,772
T22=1		118,604	129,364	128,772	132,309
T22=2			125,078	132,309	129,937
T22=3				129,937	133,757
T22=4					134,961

		1	T12	0	
	T=	4	4	T23	
		4	4	4	

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	119,646	129,364	132,309	133,757	134,961
T12=1	125,468	132,915	135,242	136,558	137,814

		1	T12	T13	
	T=	4	4	4	
		4	4	4	

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	134,961	137,814			
T13=1		136,407			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 2 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	84.293	136.407	135.242	136.558	137.814
T33=1		88.741	135.242	136.558	137.814
T33=2			91.812	136.558	137.814
T33=3				93.633	137.814
T33=4					94.231

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	104.827	108.485	111.073	112.054	112.294
T22=2	108.145	111.927	114.797	116.073	116.343
T22=3	110.776	114.487	117.566	119.028	119.369
T22=4	113.283	116.770	119.667	121.199	121.549

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	113.283	116.770	119.667	121.199	121.549
T12=1	119.722	122.970	125.576	126.824	127.105
T12=2	120.291	123.778	126.538	127.833	128.127

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	94.231	121.549	129.508	127.443	131.653
T22=1		121.027	131.863	131.653	134.715
T22=2			127.443	134.715	132.964
T22=3				132.964	136.769
T22=4					137.734

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	121.549	131.863	134.715	136.769	137.734
T12=1	127.105	135.590	138.031	139.696	140.794
T12=2	128.127	136.934	139.385	141.089	142.116

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	137.734	140.794	142.116		
T13=1		139.328	140.170		
T13=2			140.427		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 2 MID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	86,484	139,328	140,427	141,089	142,116
T33=1		90,453	140,427	141,089	142,116
T33=2			93,882	141,089	142,116
T33=3				95,894	142,116
T33=4					96,619

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	105,778	109,612	112,380	113,423	113,692
T22=2	109,367	113,286	116,289	117,663	117,958
T22=3	112,305	116,126	119,384	120,946	121,316
T22=4	114,711	118,420	121,773	123,428	123,824

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	114,711	118,420	121,773	123,428	123,824
T12=1	120,666	124,031	126,913	128,319	128,643
T12=2	121,179	124,780	127,833	129,297	129,638
T12=3	121,720	125,393	128,633	130,195	130,561

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	96,619	123,824	131,488	129,613	133,784
T22=1		122,984	133,898	133,784	136,924
T22=2			129,613	136,924	135,311
T22=3				135,311	139,114
T22=4					140,414

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	123,824	133,898	136,924	139,114	140,414
T12=1	128,643	137,406	140,063	141,922	143,181
T12=2	129,638	138,817	141,479	143,373	144,587
T12=3	130,561	139,895	142,625	144,531	145,772

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	140,414	143,181	144,587	145,772	
T13=1		141,676	142,590	143,355	
T13=2			142,867	143,637	
T13=3				143,822	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 2 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	89,437	141,676	142,867	143,822	145,772
T33=1		93,614	142,867	143,822	145,772
T33=2			96,517	143,822	145,772
T33=3				98,617	145,772
T33=4					99,375

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	108,120	111,962	114,797	115,820	116,112
T22=2	111,568	115,516	118,540	120,013	120,320
T22=3	114,806	118,632	121,932	123,406	123,999
T22=4	117,406	121,147	124,497	126,274	126,696

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	117,406	121,147	124,497	126,274	126,696
T12=1	121,494	124,930	127,940	129,507	129,874
T12=2	121,933	125,577	128,747	130,379	130,765
T12=3	122,393	126,103	129,442	131,172	131,583
T12=4	122,676	126,406	129,789	131,602	132,033

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	99,375	126,696	134,074	132,075	136,275
T22=1		125,719	136,616	136,275	139,413
T22=2			132,075	139,413	137,988
T22=3				137,988	141,798
T22=4					143,285

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	126,696	136,616	139,413	141,798	143,285
T12=1	129,074	138,860	141,421	143,504	145,020
T12=2	130,765	140,169	142,740	144,912	146,378
T12=3	131,583	141,134	143,783	146,020	147,539
T12=4	132,033	141,704	144,321	146,672	148,280

4 T12 T13
T= 4 4 -4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	143,285	145,020	146,378	147,539	148,280
T13=1		143,644	144,539	145,315	145,852
T13=2			144,741	145,843	146,061
T13=3				145,694	146,322
T13=4					146,555

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 3 BID OPPORTUNITIES REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	85.296	150.476	152.952	155.065	156.636
T33=1		88.992	152.952	155.065	156.636
T33=2			92.013	155.065	156.636
T33=3				93.580	156.636
T33=4					93.989

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	105.873	109.260	111.591	112.440	112.665
T22=2	108.662	112.327	114.980	116.113	116.376
T22=3	110.871	114.207	116.921	118.124	118.423
T22=4	114.300	117.077	119.592	120.790	121.047

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	114.300	117.077	119.592	120.790	121.047
T12=1	123.784	126.441	128.480	129.403	129.600

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	93.989	121.047	128.280	126.766	130.494
T22=1		120.184	130.881	130.494	133.987
T22=2			126.766	133.987	131.442
T22=3				131.442	135.264
T22=4					136.195

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	121.047	130.881	133.987	135.264	136.195
T12=1	129.600	137.354	139.863	140.912	141.775

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	136.195	141.775			
T13=1		142.417			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 3 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	86.029	142.417	139.863	140.912	141.775
T33=1		90.413	139.863	140.912	141.775
T33=2			93.574	140.912	141.775
T33=3				95.440	141.775
T33=4					95.985

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	106.923	110.601	113.204	114.172	114.402
T22=2	109.997	113.848	116.721	117.985	118.252
T22=3	112.379	115.963	118.996	120.451	120.776
T22=4	115.260	118.550	121.354	122.820	123.139

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	115.260	118.550	121.354	122.820	123.139
T12=1	124.987	128.015	130.358	131.410	131.635
T12=2	125.880	129.199	131.723	132.850	133.091

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	95.985	123.139	131.181	129.244	133.383
T22=1		122.686	133.438	133.383	136.482
T22=2			129.244	136.482	134.535
T22=3				134.535	138.331
T22=4					139.069

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	123.139	133.438	136.482	138.331	139.069
T12=1	131.635	140.265	142.875	144.428	145.130
T12=2	133.091	142.099	144.706	146.328	146.977

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	139.069	145.130	146.977		
T13=1		145.841	147.509		
T13=2			148.236		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 3 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	88,486	148,841	148,236	146,328	146,977
T33=1		92,258	148,236	146,328	146,977
T33=2			95,780	146,328	146,977
T33=3				97,800	146,977
T33=4					98,465

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	108,298	111,999	114,694	115,727	115,986
T22=2	111,714	115,545	118,533	119,899	120,191
T22=3	114,274	117,985	121,185	122,724	123,083
T22=4	116,863	120,389	123,587	125,117	125,477

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	116,863	120,389	123,587	125,117	125,477
T12=1	126,412	129,552	132,169	133,376	133,641
T12=2	127,239	130,677	133,497	134,793	135,080
T12=3	128,227	131,780	134,824	136,216	136,530

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	98,465	125,477	133,381	131,555	135,748
T22=1		124,767	135,634	135,748	138,845
T22=2			131,555	138,845	137,067
T22=3				137,067	140,873
T22=4					141,914

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	125,477	135,634	138,845	140,873	141,914
T12=1	133,641	142,366	145,219	146,888	147,720
T12=2	135,080	144,262	147,127	148,903	149,680
T12=3	136,530	145,810	148,778	150,410	151,447

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	141,914	147,720	149,680	151,447	
T13=1		148,372	150,137	151,575	
T13=2			150,884	152,377	
T13=3				153,035	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 3 R&D OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	92.143	148.372	150.884	153.035	151.447
T33=1		96.185	150.884	153.035	151.447
T33=2			99.020	153.035	151.447
T33=3				101.116	151.447
T33=4					101.805

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	111.460	115.150	117.795	118.861	119.129
T22=2	114.920	118.749	121.675	123.080	123.371
T22=3	117.682	121.399	124.545	126.123	126.491
T22=4	120.319	123.873	127.033	128.688	129.064

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	120.319	123.873	127.033	128.688	129.064
T12=1	128.270	131.459	134.155	135.492	135.788
T12=2	129.024	132.495	135.391	136.828	137.151
T12=3	129.919	133.495	136.609	138.152	138.503
T12=4	131.131	134.733	137.892	139.538	139.912

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	101.805	129.064	136.633	134.735	138.877
T22=1		128.162	139.036	138.877	142.065
T22=2			134.735	142.065	140.362
T22=3				140.362	144.185
T22=4					145.383

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	129.064	139.036	142.065	144.185	145.383
T12=1	135.788	144.551	147.201	149.107	150.173
T12=2	137.151	146.434	149.099	151.142	152.140
T12=3	138.503	147.933	150.717	152.809	153.891
T12=4	139.912	149.427	152.149	154.365	155.501

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	145.383	150.173	152.140	153.891	155.501
T13=1		150.476	152.261	153.744	154.904
T13=2			152.952	154.446	155.584
T13=3				155.065	156.206
T13=4					156.636

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 4 BID OPPORTUNITIES REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	86,738	156,248	159,877	163,007	165,665
T33=1		90,475	159,877	163,007	165,665
T33=2			93,564	163,007	165,665
T33=3				94,958	165,665
T33=4					95,322

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	107,463	110,899	113,200	114,007	114,226
T22=2	109,942	113,589	116,173	117,268	117,531
T22=3	112,260	115,548	118,130	119,201	119,475
T22=4	115,813	118,589	120,999	122,065	122,294

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	115,813	118,589	120,999	122,065	122,294
T12=1	126,924	129,476	131,568	132,442	132,620

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	95,322	122,294	129,475	128,055	131,742
T22=1		121,503	132,164	131,742	135,269
T22=2			128,055	135,269	132,533
T22=3				132,533	136,356
T22=4					137,049

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	122,294	132,164	135,269	136,356	137,049
T12=1	132,620	140,721	143,411	144,328	144,928

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	137,049	144,928			
T13=1		147,836			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 4 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	87.463	147.036	143.411	144.328	144.928
T33=1		91.832	143.411	144.328	144.928
T33=2			95.084	144.328	144.928
T33=3				96.989	144.928
T33=4					97.470

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	108.573	112.344	114.930	115.869	116.103
T22=2	111.300	115.256	118.130	119.363	119.640
T22=3	113.770	117.343	120.290	121.641	121.944
T22=4	116.906	120.066	122.852	124.245	124.527

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	116.906	120.066	122.852	124.245	124.527
T12=1	128.410	131.319	133.524	134.517	134.729
T12=2	129.526	132.728	135.124	136.201	136.428

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	97.470	124.527	132.320	130.625	134.559
T22=1		124.097	134.800	134.559	137.838
T22=2			130.625	137.838	135.571
T22=3				135.571	139.365
T22=4					139.901

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	124.527	134.800	137.838	139.365	139.901
T12=1	134.729	143.674	146.410	147.861	148.319
T12=2	136.428	145.798	148.539	150.087	150.502

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	139.901	148.319	150.502		
T13=1		151.381	153.640		
T13=2			154.850		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 4 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	90.234	151,381	154,850	150,087	150,502
T33=1		93,773	154,850	150,087	150,502
T33=2			97,392	150,087	150,502
T33=3				99,417	150,502
T33=4					100,025

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	110.341	113,945	116,687	117,709	117,959
T22=2	113.405	117,174	120,229	121,587	121,875
T22=3	115.904	119,465	122,646	124,129	124,461
T22=4	118.762	122,125	125,191	126,679	127,009

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	118.762	122,125	125,191	126,679	127,009
T12=1	130.186	133,192	135,639	136,705	136,936
T12=2	131.241	134,554	137,231	138,426	138,679
T12=3	132.610	136,035	138,934	140,216	140,496

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	100.025	127,009	134,772	133,098	137,112
T22=1		126,359	137,183	137,112	140,371
T22=2			133,098	140,371	138,285
T22=3				138,285	142,093
T22=4					142,811

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	127.009	137,183	140,371	142,093	142,811
T12=1	136.936	145,839	148,835	150,412	151,004
T12=2	138.679	148,037	151,037	152,770	153,305
T12=3	140.496	149,907	153,017	154,819	155,426

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	142.811	151,004	153,305	155,426	
T13=1		154,001	156,378	158,282	
T13=2			157,610	159,579	
T13=3				160,719	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 4 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	94.390	154.001	157.610	160.719	155.426
T33=1		98.277	157.610	160.719	155.426
T33=2			101.040	160.719	155.426
T33=3				103.154	155.426
T33=4					103.762

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	114.219	117.803	120.370	121.396	121.653
T22=2	117.412	121.175	124.035	125.428	125.718
T22=3	119.994	123.583	126.601	128.102	128.450
T22=4	122.740	126.131	129.133	130.680	131.018

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	122.740	126.131	129.133	130.680	131.018
T12=1	132.861	135.882	138.363	139.530	139.784
T12=2	133.867	137.192	139.905	141.211	141.490
T12=3	135.154	138.589	141.528	142.934	143.243
T12=4	137.281	140.739	143.694	145.195	145.523

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	103.762	131.018	138.573	136.857	140.853
T22=1		130.267	141.120	140.853	144.178
T22=2			136.857	144.178	142.051
T22=3				142.051	145.893
T22=4					144.869

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	131.018	141.120	144.178	145.893	146.869
T12=1	139.784	148.569	151.393	153.137	153.889
T12=2	141.490	150.796	153.635	155.579	156.258
T12=3	143.243	152.623	155.604	157.628	158.398
T12=4	145.523	154.905	157.753	159.906	160.759

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	146.869	153.889	156.258	158.398	160.759
T13=1		156.248	158.671	160.830	162.355
T13=2			159.877	161.892	163.592
T13=3				163.007	164.704
T13=4					165.665

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 5 RID OPPORTUNITIES REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	87,941	161,106	165,526	169,372	173,148
T33=1		91,859	165,526	169,372	173,148
T33=2			94,943	169,372	173,148
T33=3				96,184	173,148
T33=4					96,508

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	108,759	112,196	114,473	115,246	115,467
T22=2	111,125	114,677	117,115	118,122	118,383
T22=3	113,502	116,742	119,206	120,159	120,403
T22=4	117,159	119,935	122,251	123,200	123,404

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	117,159	119,935	122,251	123,200	123,404
T12=1	129,180	131,842	133,912	134,727	134,890

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	96,508	123,404	130,433	129,039	132,647
T22=1		122,641	133,278	132,647	136,247
T22=2			129,039	136,247	133,324
T22=3				133,324	137,147
T22=4					137,650

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	123,404	133,278	136,247	137,147	137,650
T12=1	134,890	143,359	146,200	147,018	147,436

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	137,650	147,436			
T13=1		152,448			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 5 RID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	88,708	152,448	146,200	147,018	147,436
T33=1		93,075	146,200	147,018	147,436
T33=2			96,541	147,018	147,436
T33=3				98,362	147,436
T33=4					98,786

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	109,948	113,796	116,368	117,283	117,519
T22=2	112,516	116,490	119,278	120,436	120,706
T22=3	115,030	118,631	121,496	122,748	123,030
T22=4	118,330	121,473	124,191	125,509	125,758

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	118,330	121,473	124,191	125,509	125,758
T12=1	130,798	133,641	135,875	136,805	137,005
T12=2	132,053	135,197	137,619	138,678	138,896

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	98,786	125,758	133,310	131,684	135,466
T22=1		125,320	135,979	135,466	138,878
T22=2			131,684	138,878	136,261
T22=3				136,261	140,053
T22=4					140,463

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	125,758	135,979	138,878	140,053	140,463
T12=1	137,005	146,226	149,036	150,432	150,750
T12=2	138,896	148,534	151,346	152,862	153,144

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	140,463	150,750	153,144		
T13=1		156,015	158,611		
T13=2			140,200		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 5 RIO OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	91,767	156,015	160,200	152,862	153,144
T33=1		95,117	160,200	152,862	153,144
T33=2			98,823	152,862	153,144
T33=3				100,917	153,144
T33=4					101,470

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	111,993	115,613	118,393	119,403	119,646
T22=2	114,770	118,544	121,608	122,919	123,196
T22=3	117,338	120,802	123,992	125,422	125,729
T22=4	120,429	123,654	126,678	128,121	128,425

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	120,429	123,654	126,678	128,121	128,425
T12=1	132,801	135,734	138,063	139,023	139,233
T12=2	134,011	137,253	139,843	140,964	141,196
T12=3	135,714	139,017	141,826	143,036	143,292

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	101,470	128,425	135,986	134,321	138,191
T22=1		127,776	138,563	138,191	141,580
T22=2			134,321	141,580	139,145
T22=3				139,145	142,958
T22=4					143,588

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	128,425	138,563	141,580	142,958	143,588
T12=1	139,233	148,358	151,509	152,993	153,416
T12=2	141,196	150,742	153,892	155,547	155,917
T12=3	143,292	152,858	156,114	157,854	158,290

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	143,588	153,416	155,917	158,290	
T13=1		158,617	161,331	163,521	
T13=2			162,975	165,240	
T13=3				166,801	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 5 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	96.357	158.617	162.975	166.801	168.290
T33=1		100.089	162.975	166.801	168.290
T33=2			102.834	166.801	168.290
T33=3				104.956	168.290
T33=4					105.493

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	116.487	120.000	122.556	123.582	123.832
T22=2	119.407	123.085	125.932	127.296	127.579
T22=3	121.898	125.385	128.326	129.785	130.115
T22=4	124.791	128.017	130.890	132.350	132.667

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	124.791	128.017	130.890	132.350	132.667
T12=1	136.072	138.967	141.311	142.358	142.581
T12=2	137.236	140.466	143.061	144.274	144.525
T12=3	138.867	142.171	144.990	146.300	146.578
T12=4	141.786	145.108	147.895	149.279	149.573

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	105.493	132.667	140.237	138.541	147.420
T22=1		132.084	142.914	142.420	145.853
T22=2			139.541	145.853	143.401
T22=3				143.401	147.255
T22=4					148.109

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	132.667	142.914	145.853	147.255	148.109
T12=1	142.581	151.542	154.478	156.088	156.620
T12=2	144.525	153.978	156.920	158.754	159.216
T12=3	146.578	156.050	159.141	161.074	161.619
T12=4	149.573	158.952	161.936	163.968	164.607

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	148.109	156.620	159.216	161.619	164.607
T13=1		161.106	163.894	166.128	168.299
T13=2			165.526	167.816	170.015
T13=3				169.372	171.562
T13=4					173.148

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 6 RID OPPORTUNITIES REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	88.961	165.155	170.080	174.423	179.177
T33=1		93.153	170.080	174.423	179.177
T33=2			96.171	174.423	179.177
T33=3				97.275	179.177
T33=4					97.564

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	109.866	113.279	115.497	116.277	116.503
T22=2	112.231	115.692	117.970	118.910	119.154
T22=3	114.663	117.825	120.164	121.017	121.244
T22=4	118.378	121.133	123.366	124.210	124.391

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	118.378	121.133	123.366	124.210	124.391
T12=1	131.173	133.832	135.829	136.575	136.740

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	97.564	124.391	131.260	129.790	135.337
T22=1		123.630	134.244	133.337	136.994
T22=2			129.790	136.994	133.898
T22=3				133.898	137.721
T22=4					138.086

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	124.391	134.244	136.994	137.721	138.086
T12=1	136.740	145.480	148.406	149.148	149.440

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	138.086	149.440			
T13=1		156.279			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 6 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	89.786	156.279	148.406	149.148	149.440
T33=1		94.267	148.406	149.148	149.440
T33=2			97.900	149.148	149.440
T33=3				99.581	149.440
T33=4					99.974

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	111.105	115.003	117.564	118.457	118.695
T22=2	113.650	117.639	120.343	121.420	121.671
T22=3	116.206	119.830	122.618	123.778	124.040
T22=4	119.600	122.785	125.439	126.658	126.889

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	119.600	122.785	125.439	126.658	126.889
T12=1	132.741	135.571	137.757	138.615	138.800
T12=2	134.083	137.164	139.573	140.589	140.797

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	99.974	126.889	134.149	132.496	136.164
T22=1		126.377	137.000	136.164	139.676
T22=2			132.496	139.676	136.771
T22=3				136.771	140.571
T22=4					140.891

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	126.889	137.000	139.676	140.571	140.891
T12=1	138.800	148.185	151.082	152.409	152.631
T12=2	140.797	150.618	153.488	154.958	155.151

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	140.891	152.631	155.151		
T13=1		159.832	162.576		
T13=2			164.464		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 4 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	93,109	159,832	164,464	154,958	155,151
T33=1		96,312	164,464	154,958	155,151
T33=2			100,170	154,958	155,151
T33=3				102,302	155,151
T33=4					102,806

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	113,338	117,039	119,848	120,847	121,085
T22=2	115,972	119,751	122,804	124,070	124,328
T22=3	118,600	122,044	125,234	126,610	126,894
T22=4	121,892	125,008	128,053	129,451	129,729

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	121,892	125,008	128,053	129,451	129,729
T12=1	134,918	137,736	139,956	140,861	141,061
T12=2	136,192	139,352	141,863	142,914	143,138
T12=3	138,059	141,279	144,013	145,160	145,397

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	102,806	129,729	137,063	135,287	139,048
T22=1		129,036	139,790	139,048	142,535
T22=2			135,287	142,535	139,892
T22=3				139,892	143,719
T22=4					144,274

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	129,729	139,790	142,535	143,719	144,274
T12=1	141,061	150,299	153,547	154,997	155,290
T12=2	143,138	152,809	156,014	157,612	157,866
T12=3	145,397	155,111	158,436	160,081	160,405

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	144,274	155,290	157,866	160,405	
T13=1		162,360	165,232	167,566	
T13=2			167,180	169,597	
T13=3				171,483	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 6 BID OPPORTUNITIES REMAINING

```
                    4   0   0
              T=    4   0   0
                    4 T32 T33
```

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	98.072	162.360	167.180	171.483	160.405
T33=1		101.700	167.180	171.483	160.405
T33=2			104.441	171.483	160.405
T33=3				106.572	160.405
T33=4					107.066

```
                    4   0   0
              T=    4 T22   0
                    4   4 T33
```

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	118.348	121.849	124.434	125.454	125.700
T22=2	121.047	124.694	127.537	128.866	129.143
T22=3	123.482	126.889	129.817	131.227	131.539
T22=4	124.595	129.689	132.457	133.883	134.175

```
                    4 T12   0
              T=    4   4   0
                    4   4 T33
```

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	126.595	129.689	132.457	133.883	134.175
T12=1	138.704	141.541	143.777	144.739	144.943
T12=2	139.975	143.129	145.610	146.731	146.959
T12=3	141.749	144.965	147.682	148.863	149.111
T12=4	145.146	148.345	151.008	152.303	152.571

```
                    4   0   0
              T=    4 T22 T23
                    4   4   4
```

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	107.066	134.175	141.658	139.878	143.693
T22=1		139.654	144.461	143.693	147.178
T22=2			139.878	147.178	144.592
T22=3				144.592	148.432
T22=4					149.187

```
                    4 T12   0
              T=    4   4 T23
                    4   4   4
```

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	134.175	144.461	147.178	148.432	149.187
T12=1	144.943	153.914	154.979	158.394	158.774
T12=2	146.959	156.408	159.469	161.137	161.462
T12=3	149.111	158.522	161.819	163.600	163.990
T12=4	152.571	162.047	165.087	166.089	167.473

```
                    4 T12 T13
              T=    4   4   4
                    4   4   4
```

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	149.187	158.774	161.462	163.990	167.473
T13=1		165.155	168.112	170.487	173.051
T13=2			170.080	172.543	175.143
T13=3				174.423	177.035
T13=4					179.177

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 7 BID OPPORTUNITIES REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	89,939	168,491	173,699	178,361	183,990
T33=1		94,360	173,699	178,361	183,990
T33=2			97,264	178,361	183,990
T33=3				98,247	183,990
T33=4					98,503

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	110,901	114,231	116,352	117,138	117,368
T22=2	113,263	116,641	118,768	119,647	119,875
T22=3	115,746	118,837	121,021	121,818	122,030
T22=4	119,517	122,221	124,358	125,109	125,271

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	119,517	122,221	124,358	125,109	125,271
T12=1	133,067	135,646	137,544	138,211	138,363

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	98,503	125,271	131,978	130,364	133,864
T22=1		124,487	135,083	133,864	137,565
T22=2			130,364	137,565	134,313
T22=3				134,313	138,137
T22=4					138,421

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	125,271	135,083	137,565	138,137	138,421
T12=1	138,363	147,238	150,223	150,893	151,100

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	138,421	151,100			
T13=1		159,519			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 7 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	90.721	159.519	160.223	160.893	161.100
T33=1		95.423	160.223	160.893	161.100
T33=2			99.164	160.893	161.100
T33=3				100.715	161.100
T33=4					101.079

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	112.184	116.093	118.579	119.433	119.673
T22=2	114.709	118.707	121.331	122.332	122.567
T22=3	117.303	120.947	123.660	124.734	124.977
T22=4	120.785	124.007	126.600	127.726	127.940

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	120.785	124.007	126.600	127.726	127.940
T12=1	134.542	137.311	139.422	140.218	140.384
T12=2	135.955	138.927	141.298	142.256	142.445

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	101.079	127.940	134.913	133.119	136.700
T22=1		127.294	137.885	136.700	140.287
T22=2			133.119	140.287	137.175
T22=3				137.175	140.994
T22=4					141.305

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	127.940	137.885	140.287	140.994	141.305
T12=1	140.384	149.835	152.847	153.994	154.143
T12=2	142.445	152.298	155.299	156.601	156.730

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	141.305	154.143	156.730		
T13=1		162.953	165.724		
T13=2			167.827		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 7 RID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	94,303	162,953	167,827	156,601	156,730
T33=1		97,394	167,827	156,601	156,730
T33=2			101,469	156,601	156,730
T33=3				103,579	156,730
T33=4					104,038

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	114,531	118,287	121,104	122,082	122,323
T22=2	117,115	120,909	123,933	125,138	125,386
T22=3	119,759	123,214	126,378	127,702	127,964
T22=4	123,178	126,266	129,323	130,675	130,929

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	123,178	126,266	129,323	130,675	130,929
T12=1	136,848	139,572	141,717	142,574	142,761
T12=2	138,184	141,241	143,644	144,646	144,854
T12=3	140,166	143,252	145,864	146,956	147,182

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	104,038	130,929	138,016	136,100	139,809
T22=1		130,155	140,878	139,809	143,349
T22=2			136,100	143,349	140,550
T22=3				140,550	144,389
T22=4					144,874

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	130,929	140,878	143,349	144,389	144,874
T12=1	142,761	152,009	155,363	156,641	156,844
T12=2	144,854	154,538	157,863	159,299	159,475
T12=3	147,182	156,936	160,364	161,911	162,135

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	144,874	156,844	159,475	162,135	
T13=1		165,448	168,352	170,757	
T13=2			170,521	173,003	
T13=3				175,140	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 7 MID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	99,565	165,448	170,521	175,140	162,135
T33=1		103,142	170,521	175,140	162,135
T33=2			105,888	175,140	162,135
T33=3				108,058	162,135
T33=4					108,510

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	119,882	123,438	126,038	127,053	127,296
T22=2	122,416	126,086	128,905	130,197	130,466
T22=3	124,892	128,237	131,134	132,494	132,784
T22=4	128,188	131,177	133,907	135,290	135,557

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	128,188	131,177	133,907	135,290	135,557
T12=1	141,053	143,000	145,933	146,824	147,010
T12=2	142,396	145,443	147,818	148,861	149,069
T12=3	144,314	147,385	149,956	151,088	151,313
T12=4	147,971	151,065	153,601	154,803	155,044

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	108,510	135,557	142,875	141,054	144,814
T22=1		135,013	145,798	144,814	148,327
T22=2			141,054	148,327	145,625
T22=3				145,625	149,454
T22=4					150,112

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	135,557	145,798	148,327	149,454	150,112
T12=1	147,010	156,033	159,175	160,319	160,626
T12=2	149,069	158,557	161,707	163,090	163,351
T12=3	151,313	160,836	164,145	165,669	165,947
T12=4	155,044	164,483	167,632	169,373	169,720

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	150,112	160,626	163,351	165,947	169,720
T13=1		168,491	171,492	173,932	176,864
T13=2			173,699	176,222	179,205
T13=3				178,361	181,341
T13=4					183,990

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 8 BID OPPORTUNITIES REMAINING

```
                    I   0   0
              T=    4   0   0
                    4 T32 T33
```

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	90.886	171.251	176.584	181.467	187.828
T33=1		95.489	176.584	181.467	187.828
T33=2			98.237	181.467	187.828
T33=3				99.118	187.828
T33=4					99.358

```
                    I   0   0
              T=    4 T22   0
                    4   4 T33
```

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	111.867	115.119	117.101	117.856	118.090
T22=2	114.227	117.528	119.514	120.335	120.548
T22=3	116.759	119.782	121.822	122.566	122.764
T22=4	120.581	123.237	125.241	125.935	126.085

```
                    I T12   0
              T=    4   4   0
                    4   4 T33
```

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	120.581	123.237	125.241	125.935	126.085
T12=1	134.878	137.382	139.165	139.759	139.894

```
                    I   0   0
              T=    4 T22 T23
                    4   4   4
```

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	99.358	126.085	132.601	130.802	134.266
T22=1		125.232	135.811	134.266	138.000
T22=2			130.802	138.000	134.634
T22=3				134.634	138.464
T22=4					138.709

```
                    I T12   0
              T=    4   4 T23
                    4   4   4
```

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	126.085	135.811	138.000	138.464	138.709
T12=1	139.894	148.811	151.766	152.349	152.500

```
                    I T12 T13
              T=    4   4   4
                    4   4   4
```

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	138.709	152.500			
T13=1		162.262			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 0 PID OPPORTUNITIES REMAINING

		2 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	91.537	162.262	151.766	152.349	152.500
T33=1		96.542	151.766	152.349	152.500
T33=2			100.339	152.349	152.500
T33=3				101.769	152.500
T33=4					102.106

		2 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	113.190	117.106	119.521	120.317	120.541
T22=2	115.697	119.700	122.247	123.178	123.397
T22=3	118.328	121.986	124.628	125.621	125.847
T22=4	121.090	125.143	127.679	128.718	128.917

		2 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	121.890	125.143	127.679	128.718	128.917
T12=1	134.226	138.981	141.017	141.755	141.902
T12=2	137.696	140.618	142.919	143.816	143.983

		2 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	102.106	128.917	135.558	133.596	137.112
T22=1		128.087	138.651	137.112	140.757
T22=2			133.596	140.757	137.566
T22=3				137.566	141.403
T22=4					141.703

		2 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	128.917	138.651	140.757	141.403	141.703
T12=1	141.902	151.353	154.382	155.271	155.372
T12=2	143.983	153.824	156.878	157.924	158.011

		2 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	141.703	155.372	158.011		
T13=1		165.524	168.275		
T13=2			170.525		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 8 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	95.388	165.524	170.525	157.924	158.011
T33=1		98.400	170.525	157.924	158.011
T33=2			102.716	157.924	158.011
T33=3				104.756	158.011
T33=4					105.173

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	115.649	119.411	122.212	123.171	123.416
T22=2	118.214	122.018	125.007	126.152	126.392
T22=3	120.868	124.338	127.470	128.722	128.972
T22=4	124.356	127.447	130.495	131.800	132.032

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	124.356	127.447	130.495	131.800	132.032
T12=1	138.626	141.254	143.343	144.174	144.349
T12=2	140.024	142.986	145.326	146.281	146.475
T12=3	142.108	145.088	147.607	148.652	148.862

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	105.173	132.032	138.859	136.817	140.478
T22=1		131.145	141.842	140.478	144.067
T22=2			136.817	144.067	141.126
T22=3				141.126	144.978
T22=4					145.433

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	132.032	141.842	144.067	144.978	145.433
T12=1	144.349	153.639	156.962	157.984	158.125
T12=2	146.475	156.176	159.498	160.679	160.801
T12=3	148.862	158.610	162.098	163.446	163.602

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	145.433	158.125	160.801	163.602	
T13=1		168.002	170.874	173.337	
T13=2			173.189	175.720	
T13=3				178.036	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 4 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	100.874	148.032	173.189	178.036	163.602
T33=1		104.441	173.189	178.036	163.602
T33=2			107.238	178.036	163.602
T33=3				109.420	163.602
T33=4					109.834

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	121.197	124.907	127.406	128.416	128.657
T22=2	123.620	127.304	130.087	131.339	131.599
T22=3	126.154	129.490	132.344	133.653	133.922
T22=4	129.602	132.532	135.244	136.577	136.822

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	129.602	132.532	135.244	136.577	136.822
T12=1	143.173	145.836	147.874	148.497	148.870
T12=2	144.571	147.530	149.812	150.795	150.975
T12=3	144.614	149.577	152.041	153.101	153.308
T12=4	150.517	153.449	155.922	157.047	157.264

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	109.834	136.822	143.952	142.083	145.789
T22=1		136.189	146.954	145.789	149.333
T22=2			142.083	149.333	146.511
T22=3				146.511	150.334
T22=4					150.904

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	136.822	146.954	149.333	150.334	150.904
T12=1	148.870	157.286	161.096	162.031	162.274
T12=2	150.975	160.531	163.660	164.820	165.024
T12=3	153.308	162.955	166.196	167.473	167.698
T12=4	157.264	166.480	169.939	171.387	171.640

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	150.904	162.274	165.024	167.698	171.640
T13=1		171.251	174.224	176.713	179.980
T13=2			176.584	179.148	182.474
T13=3				181.467	184.775
T13=4					187.828

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 9 RID OPPORTUNITIES REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	91.801	173.647	178.987	183.979	190.959
T33=1		96.542	178.987	183.979	190.959
T33=2			99.109	183.979	190.959
T33=3				99.933	190.959
T33=4					100.156

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	112.770	115.949	117.800	118.506	118.724
T22=2	115.128	118.355	120.211	120.977	121.176
T22=3	117.704	120.664	122.570	123.265	123.450
T22=4	121.574	124.185	126.057	126.705	126.846

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	121.574	124.185	126.057	126.705	126.846
T12=1	136.607	139.040	140.715	141.244	141.364

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	100.156	126.846	133.142	131.142	134.587
T22=1		125.878	136.444	134.587	138.343
T22=2			131.142	138.343	134.906
T22=3				134.906	138.746
T22=4					138.959

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	126.846	136.444	138.343	138.746	138.959
T12=1	141.364	150.264	153.093	153.571	153.680

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	138.959	153.680			
T13=1		164.606			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 9 BID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	92.277	164.606	153.093	153.571	153.680
T33=1		97.625	153.093	153.571	153.680
T33=2			101.430	153.571	153.680
T33=3				102.748	153.680
T33=4					103.059

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	114.129	118.048	120.395	121.137	121.346
T22=2	116.619	120.625	123.098	123.964	124.168
T22=3	119.285	122.954	125.526	126.445	126.656
T22=4	122.921	126.201	128.681	129.640	129.823

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	122.921	126.201	128.681	129.640	129.823
T12=1	137.846	140.581	142.540	143.222	143.352
T12=2	139.314	142.247	144.481	145.320	145.468

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	103.059	129.823	136.117	134.009	137.506
T22=1		128.774	139.315	137.506	141.177
T22=2			134.009	141.177	137.941
T22=3				137.941	141.796
T22=4					142.084

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	129.823	139.315	141.177	141.796	142.084
T12=1	143.352	152.760	155.711	156.384	156.464
T12=2	145.468	155.251	158.251	159.050	159.117

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	142.084	156.464	159.117		
T13=1		167.692	170.410		
T13=2			172.760		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 9 MID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	96,375	167,692	172,760	159,050	159,117
T33=1		99,378	172,760	159,050	159,117
T33=2			103,909	159,050	159,117
T33=3				105,839	159,117
T33=4					106,219

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	116,720	120,485	123,255	124,169	124,405
T22=2	119,267	123,078	126,027	127,116	127,345
T22=3	121,934	125,415	128,510	129,693	129,932
T22=4	125,473	128,581	131,600	132,835	133,050

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	125,473	128,581	131,600	132,835	133,050
T12=1	140,312	142,840	144,927	145,697	145,858
T12=2	141,767	144,609	146,916	147,831	148,010
T12=3	143,943	146,793	149,265	150,266	150,463

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	106,219	133,050	139,604	137,444	141,062
T22=1		132,022	142,695	141,062	144,694
T22=2			137,444	144,694	141,659
T22=3				141,659	145,531
T22=4					145,958

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	133,050	142,695	144,694	145,531	145,958
T12=1	145,858	155,178	158,360	159,159	159,271
T12=2	148,010	157,730	160,937	161,869	161,964
T12=3	150,463	160,218	163,653	164,745	164,852

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	145,958	159,271	161,964	164,852	
T13=1		170,184	172,992	175,480	
T13=2			175,369	177,938	
T13=3				180,396	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 9 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	102.032	170.184	175.369	180.396	184.852
T33=1		105.423	175.369	180.396	184.852
T33=2			108.494	180.396	184.852
T33=3				110.668	184.852
T33=4					111.047

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	122.356	125.999	128.579	129.579	129.819
T22=2	124.746	128.430	131.148	132.356	132.600
T22=3	127.310	130.657	133.457	134.715	134.966
T22=4	130.066	133.793	136.474	137.758	137.983

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	130.866	133.793	136.474	137.758	137.983
T12=1	145.104	147.691	149.634	150.424	150.589
T12=2	146.541	149.431	151.629	152.541	152.721
T12=3	148.701	151.572	153.948	154.946	155.137
T12=4	152.867	155.729	158.053	159.103	159.302

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	111.047	137.983	144.909	142.973	146.630
T22=1		137.238	147.966	146.630	150.205
T22=2			142.973	150.205	147.270
T22=3				147.270	151.089
T22=4					151.586

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	137.983	147.966	150.205	151.089	151.586
T12=1	150.589	159.780	162.765	163.531	163.721
T12=2	152.721	162.343	165.363	166.325	166.482
T12=3	155.137	164.731	168.007	169.074	169.252
T12=4	159.302	168.733	172.014	173.184	173.397

4 T12 T13
T= 4 4 0
4 4 0

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	151.586	163.721	166.482	169.252	173.397
T13=1		173.647	176.559	179.067	182.577
T13=2			178.987	181.568	185.162
T13=3				183.979	187.583
T13=4					190.959

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 10 BID OPPORTUNITIES REMAINING

		1 0 0			
		T= 4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	92.686	175.764	181.081	186.184	193.586
T33=1		97.526	181.081	186.184	193.586
T33=2			99.924	186.184	193.586
T33=3				100.693	193.586
T33=4					100.902

		1 0 0			
		T= 4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	113.613	116.724	118.453	119.112	119.316
T22=2	115.969	119.129	120.861	121.577	121.763
T22=3	118.587	121.488	123.268	123.917	124.090
T22=4	122.502	125.072	126.820	127.425	127.557

		1 T12 0			
		T= 4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	122.502	125.072	126.820	127.425	127.557
T12=1	138.256	140.622	142.195	142.665	142.773

		1 0 0			
		T= 4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	100.902	127.557	133.611	131.437	134.865
T22=1		126.439	136.992	134.865	138.641
T22=2			131.437	138.641	135.143
T22=3				135.143	138.991
T22=4					139.175

		1 T12 0			
		T= 4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	127.557	136.992	138.641	138.991	139.175
T12=1	142.773	151.605	154.237	154.602	154.685

		1 T12 T13			
		T= 4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	139.175	154.685			
T13=1		166.660			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 10 BID OPPORTUNITIES REMAINING

T= 2 0 0
4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	92.987	166.660	154.237	154.602	154.685
T33=1		98.671	154.237	154.602	154.685
T33=2			102.442	154.602	154.685
T33=3				103.657	154.685
T33=4					103.944

T= 2 0 0
4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	115.010	118.924	121.205	121.897	122.093
T22=2	117.491	121.485	123.887	124.692	124.804
T22=3	120.178	123.855	126.360	127.211	127.407
T22=4	123.882	127.185	129.610	130.495	130.665

T= 2 T12 0
4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	123.882	127.185	129.610	130.495	130.665
T12=1	139.400	142.112	143.990	144.620	144.736
T12=2	140.847	143.812	145.982	146.766	146.897

T= 2 0 0
4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	103.944	130.665	134.602	134.407	137.884
T22=1		129.368	139.890	137.884	141.581
T22=2			134.407	141.581	138.301
T22=3				138.301	142.172
T22=4					142.449

T= 2 T12 0
4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	130.665	139.890	141.581	142.172	142.449
T12=1	144.736	154.077	156.861	157.372	157.434
T12=2	146.897	156.590	159.448	160.058	160.110

T= 2 T12 T13
4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	142.449	157.434	160.110		
T13=1		169.582	172.251		
T13=2			174.656		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 10 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	97.276	149,582	174,656	160,058	160,110
T33=1		100,330	174,656	160,058	160,110
T33=2			105,046	160,058	160,110
T33=3				106,850	160,110
T33=4					107,210

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	117,744	121,510	124,245	125,115	125,341
T22=2	120,275	124,090	126,996	128,029	128,249
T22=3	122,957	126,446	129,501	130,616	130,845
T22=4	126,545	129,668	132,654	133,816	134,020

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	126,545	129,668	132,654	133,816	134,020
T12=1	141,911	144,387	146,440	147,168	147,316
T12=2	143,418	146,163	148,462	149,338	149,502
T12=3	145,685	148,414	150,854	151,818	152,000

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	107,210	134,020	140,261	138,001	141,598
T22=1		132,797	143,449	141,598	145,265
T22=2			138,001	145,265	142,160
T22=3				142,160	146,050
T22=4					146,451

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	134,020	143,449	145,265	146,050	146,451
T12=1	147,316	156,626	159,579	160,203	160,292
T12=2	149,502	159,197	162,203	162,936	163,011
T12=3	152,000	161,756	165,045	165,904	165,990

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	146,451	160,292	163,011	165,990	
T13=1		172,124	174,867	177,396	
T13=2			177,295	179,892	
T13=3				182,420	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 10 BID OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	103,067	172,124	177,295	182,420	165,990
T33=1		106,742	177,295	182,420	165,990
T33=2			109,660	182,420	165,990
T33=3				111,814	165,990
T33=4					112,161

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	123,408	127,047	129,596	130,581	130,817
T22=2	125,807	129,478	132,127	133,289	133,519
T22=3	129,396	131,745	134,485	135,693	135,926
T22=4	132,020	134,967	137,608	138,841	139,048

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	132,020	134,967	137,608	138,841	139,048
T12=1	144,880	149,395	151,282	152,030	152,185
T12=2	148,342	151,178	153,303	154,182	154,351
T12=3	150,613	153,398	155,705	156,653	156,836
T12=4	155,014	157,794	160,022	161,008	161,192

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	112,161	139,048	145,759	143,739	147,353
T22=1		138,179	148,876	147,153	150,958
T22=2			143,739	150,958	147,923
T22=3				147,923	151,741
T22=4					152,176

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	139,048	148,876	150,958	151,741	152,176
T12=1	152,185	161,431	164,214	164,849	165,009
T12=2	154,351	164,009	166,850	167,446	167,777
T12=3	156,836	166,478	169,606	170,488	170,628
T12=4	161,192	170,469	173,867	174,817	174,994

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	152,176	165,009	167,777	170,628	174,994
T13=1		175,764	178,605	181,144	184,887
T13=2			181,081	183,687	187,502
T13=3				186,184	189,983
T13=4					193,586

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 11 BID OPPORTUNITIES REMAINING

1 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	93,542	177,715	182,985	188,135	195,928
T33=1		98,446	182,985	188,135	195,928
T33=2			100,685	188,135	195,928
T33=3				101,403	195,928
T33=4					101,598

1 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	114,400	117,448	119,063	119,679	119,869
T22=2	116,755	119,851	121,449	122,138	122,311
T22=3	119,412	122,258	123,921	124,527	124,689
T22=4	123,369	125,899	127,532	128,098	128,220

1 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	123,369	125,899	127,532	128,098	128,220
T12=1	139,825	142,128	143,605	144,024	144,119

1 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	101,598	128,220	134,018	131,693	135,107
T22=1		126,926	137,468	135,107	138,900
T22=2			131,693	138,900	135,348
T22=3				135,348	139,203
T22=4					139,371

1 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	128,220	137,468	138,900	139,203	139,371
T12=1	144,119	152,839	155,226	155,505	155,569

1 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	139,371	155,569			
T13=1		168,481			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 11 AID OPPORTUNITIES REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	93.680	148.481	155.226	155.505	155.569
T33=1		99.680	155.226	155.505	155.569
T33=2			103.381	155.505	155.569
T33=3				104.500	155.569
T33=4					104.766

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	115.861	119.762	121.957	122.617	122.807
T22=2	118.333	122.312	124.619	125.389	125.576
T22=3	121.035	124.702	127.134	127.923	128.105
T22=4	124.779	128.101	130.472	131.290	131.448

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	124.779	128.101	130.472	131.290	131.448
T12=1	140.895	143.586	145.388	145.972	146.079
T12=2	142.328	145.312	147.420	148.152	148.268

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	104.766	131.448	137.022	134.788	138.246
T22=1		129.884	140.389	138.246	141.968
T22=2			134.708	141.968	138.645
T22=3				138.645	142.532
T22=4					142.796

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	131.448	140.389	141.968	142.532	142.796
T12=1	146.079	155.304	157.858	158.246	158.295
T12=2	148.268	157.841	160.496	160.962	161.003

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	142.796	158.295	161.003		
T13=1		171.249	173.874		
T13=2			176.323		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 11 BID OPPORTUNITIES REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	98.100	171.249	176.323	160.962	161.003
T33=1		101.256	176.323	160.962	161.003
T33=2			104.130	160.962	161.003
T33=3				107.815	161.003
T33=4					108.155

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	118.724	122.487	125.183	126.011	126.227
T22=2	121.240	125.054	127.915	128.894	129.104
T22=3	123.936	127.430	130.442	131.494	131.712
T22=4	127.572	130.707	133.657	134.751	134.944

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	127.572	130.707	133.657	134.751	134.944
T12=1	143.427	145.892	147.900	148.587	148.722
T12=2	144.981	147.676	149.963	150.798	150.948
T12=3	147.341	149.967	152.403	153.330	153.498

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	108.155	134.944	140.840	138.524	142.102
T22=1		133.481	144.115	142.102	145.801
T22=2			138.524	145.801	142.629
T22=3				142.629	146.537
T22=4					146.912

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	134.944	144.115	145.801	146.537	146.912
T12=1	148.722	157.984	160.643	161.175	161.254
T12=2	150.948	160.578	163.320	163.920	163.987
T12=3	153.498	163.220	166.292	166.968	167.037

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	146.912	161.254	163.987	167.037	
T13=1		173.842	176.532	179.111	
T13=2			179.001	181.640	
T13=3				184.243	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
2 YEARS AND 11 R'D OPPORTUNITIES REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	104.061	173.842	179.001	184.243	167.037
T33=1		107.002	179.001	184.243	167.037
T33=2			110.744	184.243	167.037
T33=3				112.868	167.037
T33=4					113.188

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	124.396	128.017	130.497	131.452	131.684
T22=2	126.792	130.454	133.032	134.148	134.364
T22=3	129.415	132.761	135.436	136.594	136.812
T22=4	133.102	136.063	138.654	139.839	140.030

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	133.102	136.063	138.654	139.839	140.030
T12=1	148.523	150.978	152.825	153.531	153.677
T12=2	150.002	152.796	154.879	155.721	155.878
T12=3	152.378	155.090	157.340	158.265	158.440
T12=4	156.988	159.695	161.839	162.779	162.955

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	113.188	140.030	146.511	144.401	147.979
T22=1		139.020	149.689	147.979	151.611
T22=2			144.401	151.611	148.487
T22=3				148.487	152.307
T22=4					152.689

4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	140.030	149.689	151.611	152.307	152.689
T12=1	153.677	162.951	165.509	166.062	166.196
T12=2	155.878	165.545	168.167	168.843	168.972
T12=3	158.440	168.107	171.021	171.757	171.877
T12=4	162.955	172.485	175.516	176.289	176.436

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	152.689	166.196	168.972	171.877	176.436
T13=1		177.715	180.494	183.049	186.951
T13=2			182.985	185.601	189.585
T13=3				188.135	192.130
T13=4					195.928

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 2 YEARS REMAINING

		1 0 0			
	T=	4 0 0			
		4 T32 T33			
	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	88,541	164,586	169,388	173,691	178,727
T33=1		92,784	169,388	173,691	178,727
T33=2			95,658	173,691	178,727
T33=3				96,710	178,727
T33=4					96,986

		1 0 0			
	T=	4 T22 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	109,231	112,539	114,644	115,406	115,628
T22=2	111,590	114,976	117,155	118,059	118,290
T22=3	114,020	117,113	119,337	120,173	120,393
T22=4	117,718	120,405	122,543	123,353	123,527

		1 T12 0			
	T=	4 4 0			
		4 4 T33			
	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	117,718	120,405	122,543	123,353	123,527
T12=1	130,763	133,302	135,199	135,893	136,045

		1 0 0			
	T=	4 T22 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	96,986	123,527	130,215	128,618	132,119
T22=1		122,716	133,218	132,119	135,750
T22=2			128,618	135,750	132,634
T22=3				132,634	136,423
T22=4					136,791

		1 T12 0			
	T=	4 4 T23			
		4 4 4			
	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	123,527	133,218	135,750	136,423	136,791
T12=1	136,045	144,649	147,499	148,190	148,474

		1 T12 T13			
	T=	4 4 4			
		4 4 4			
	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	136,791	148,474			
T13=1		155,830			

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 2 YEARS REMAINING

2 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	89,250	155,830	147,499	148,190	148,474
T33=1		93,910	147,499	148,190	148,474
T33=2			97,504	148,190	148,474
T33=3				99,098	148,474
T33=4					99,477

2 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	110,473	114,315	116,786	117,634	117,864
T22=2	113,007	116,954	119,589	120,617	120,857
T22=3	115,554	119,148	121,871	122,979	123,230
T22=4	118,944	122,122	124,719	125,878	126,100

2 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	118,944	122,122	124,719	125,878	126,100
T12=1	132,197	134,974	137,078	137,898	138,069
T12=2	133,532	136,541	138,879	139,844	140,035

2 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	99,477	126,100	133,106	131,319	134,938
T22=1		125,456	135,961	134,938	138,427
T22=2			131,319	138,427	135,541
T22=3				135,541	139,318
T22=4					139,669

2 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	126,100	135,961	138,427	139,318	139,669
T12=1	138,069	147,302	150,183	151,326	151,539
T12=2	140,035	149,671	152,554	153,832	154,020

2 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	139,669	151,539	154,020		
T13=1		159,208	161,835		
T13=2			163,735		

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 2 YEARS REMAINING

3 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	92,674	159,208	163,735	153,832	154,020
T33=1		95,834	163,735	153,832	154,020
T33=2			99,813	153,832	154,020
T33=3				101,855	154,020
T33=4					102,335

3 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	112,704	116,377	119,139	120,109	120,348
T22=2	115,358	119,110	122,101	123,315	123,568
T22=3	117,950	121,391	124,520	125,846	126,120
T22=4	121,214	124,338	127,353	128,707	128,971

3 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	121,214	124,338	127,353	128,707	128,971
T12=1	134,374	137,117	139,308	140,191	140,382
T12=2	135,653	138,716	141,159	142,185	142,397
T12=3	137,513	140,620	143,265	144,380	144,611

3 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	102,335	128,971	136,074	134,215	137,943
T22=1		128,197	138,831	137,943	141,397
T22=2			134,215	141,397	138,750
T22=3				138,750	142,548
T22=4					143,086

3 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	128,971	138,831	141,397	142,548	143,086
T12=1	140,382	149,487	152,673	153,937	154,219
T12=2	142,397	151,924	155,099	156,514	156,762
T12=3	144,611	154,186	157,495	159,011	159,310

3 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	143,086	154,219	156,762	159,310	
T13=1		161,714	164,459	166,744	
T13=2			166,410	168,771	
T13=3				170,690	

EXPECTED INCREASE IN ASSETS, 1000'S OF $
ANNUAL SUMMARY, 2 YEARS REMAINING

4 0 0
T= 4 0 0
4 T32 T33

	T32=0	T32=1	T32=2	T32=3	T32=4
T33=0	97.668	161.714	166.410	170.690	159.310
T33=1		101.287	166.410	170.690	159.310
T33=2			104.033	170.690	159.310
T33=3				106.160	159.310
T33=4					104.633

4 0 0
T= 4 T22 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T22=1	117.680	121.207	123.764	124.771	125.014
T22=2	120.329	123.975	126.760	128.052	128.319
T22=3	122.812	126.188	129.065	130.432	130.728
T22=4	125.967	129.019	131.776	133.165	133.442

4 T12 0
T= 4 4 0
4 4 T33

	T33=0	T33=1	T33=2	T33=3	T33=4
T12=0	125.967	129.019	131.776	133.165	133.442
T12=1	138.244	141.004	143.175	144.106	144.304
T12=2	139.507	142.574	144.985	146.045	146.284
T12=3	141.308	144.411	147.021	148.190	148.430
T12=4	144.669	147.784	150.366	151.608	151.863

4 0 0
T= 4 T22 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T22=0	106.633	133.442	140.700	138.908	142.668
T22=1		132.831	143.516	142.668	146.117
T22=2			138.908	146.117	143.529
T22=3				143.529	147.325
T22=4					148.032

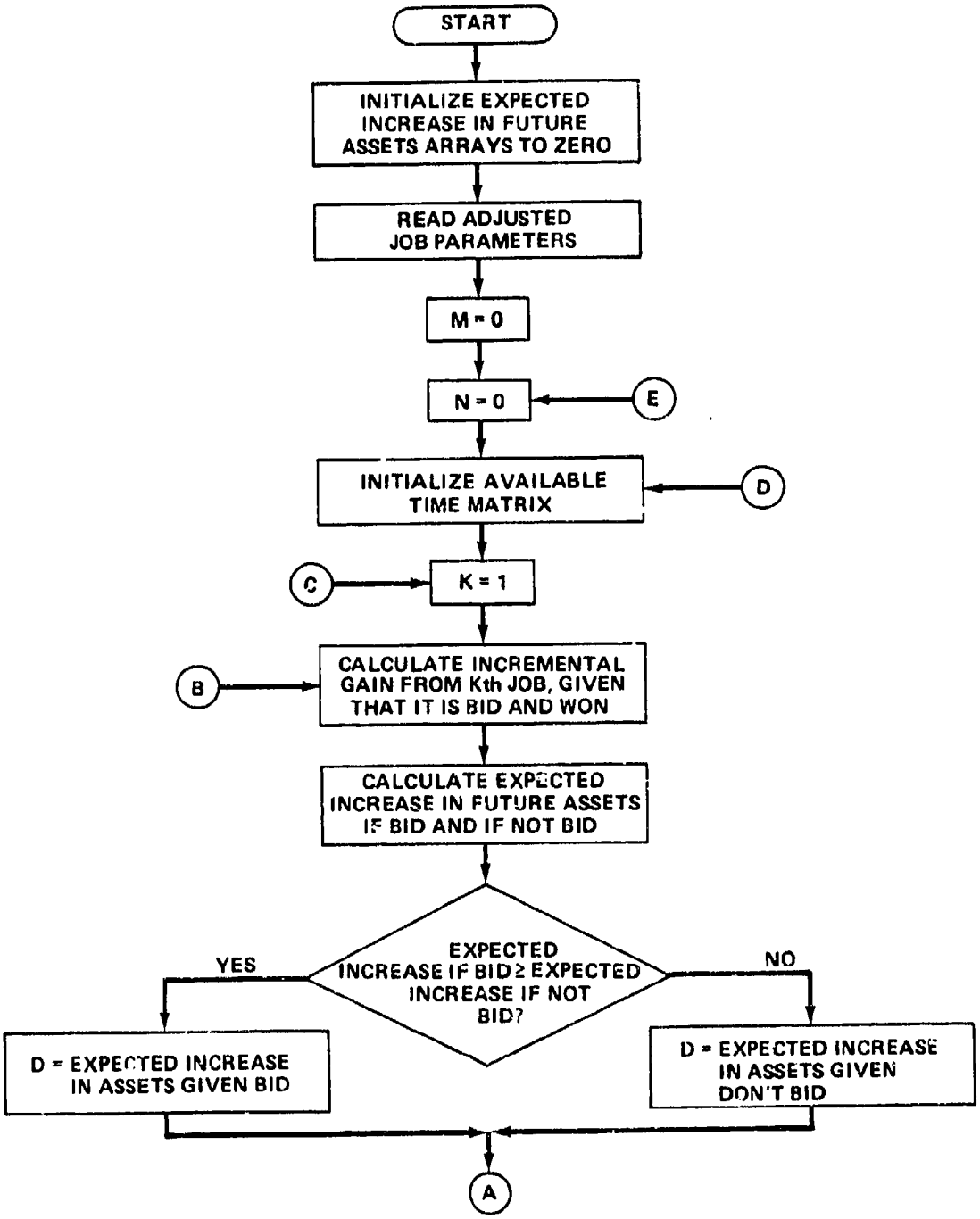
4 T12 0
T= 4 4 T23
4 4 4

	T23=0	T23=1	T23=2	T23=3	T23=4
T12=0	133.442	143.516	146.117	147.325	148.032
T12=1	144.304	153.224	154.213	157.463	157.849
T12=2	146.284	155.670	158.671	160.143	160.478
T12=3	148.430	157.845	161.016	162.598	162.979
T12=4	151.863	161.199	164.259	165.986	166.435

4 T12 T13
T= 4 4 4
4 4 4

	T12=0	T12=1	T12=2	T12=3	T12=4
T13=0	148.032	157.849	160.478	162.979	166.435
T13=1		164.586	167.414	169.738	172.427
T13=2			169.388	171.785	174.511
T13=3				173.691	176.419
T13=4					178.727

APPENDIX B


START
INITIALIZE EXPECTED INCREASE IN FUTURE ASSETS ARRAYS TO ZERO
READ ADJUSTED JOB PARAMETERS
M = 0
N = 0
E
INITIALIZE AVAILABLE TIME MATRIX
D
C
K = 1
B
CALCULATE INCREMENTAL GAIN FROM Kth JOB, GIVEN THAT IT IS BID AND WON
CALCULATE EXPECTED INCREASE IN FUTURE ASSETS IF BID AND IF NOT BID
EXPECTED INCREASE IF BID ≥ EXPECTED INCREASE IF NOT BID?
YES
NO
D = EXPECTED INCREASE IN ASSETS GIVEN BID
D = EXPECTED INCREASE IN ASSETS GIVEN DON'T BID
A